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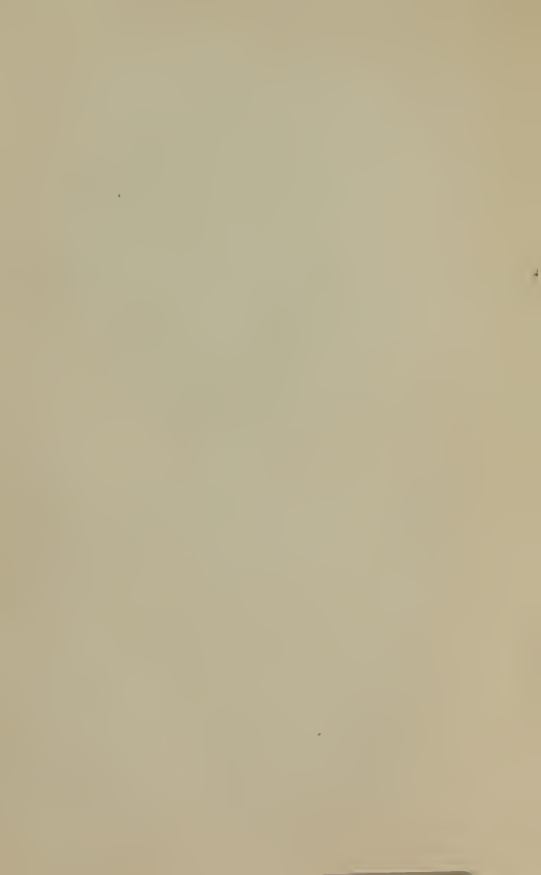
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CUTANEOUS AND VENEREAL MEMORANDA.

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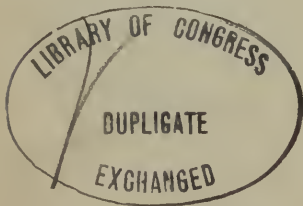
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PREFACE.

THE fact that many students are unable during their pupilage to procure voluminous works on special subjects has induced the Authors to prepare the present volume. In doing so they have endeavored to inculcate principles rather than to elaborate details, and to present the facts in as compact a form as possible. The discussion of theoretical questions has been avoided, and histological details have been omitted. The increasing use of the Metric System in prescribing has led the Authors to express the various formulæ both by the old and the new methods. Chapters thirty-nine to forty-three have been written by Dr. Fox, the rest of the work by Dr. Piffard.

THE AUTHORS.

NEW YORK, August, 1877.

TABLE OF CONTENTS.

CHAPTER	PAGE
I.—Anatomy of the Skin.....	1
II.—Physiology of the Skin.....	7
III.—Pathology of the Skin.....	9
IV.—Symptomatology.....	13
V.—Diagnosis.....	18
VI.—Nomenclature.....	19
VII.—Classification.....	20
VIII.—The Scrofulides.....	28
IX.—The Rheumides.....	41
X.—Eczema.....	46
XI.—Psoriasis.....	59
XII.—Pityriasis.....	66
XIII.—Leprosy.....	68
XIV.—Ichthyosis.....	72
XV.—Acne.....	76
XVI.—Rosacea.....	86
XVII.—Urticaria.....	91
XVIII.—Zoster.....	94
XIX.—Herpes.....	98
XX.—Xanthoma.....	101
XXI.—Chloasma.....	103
XXII.—Scabies.....	106
XXIII.—Phthiriasis.....	111
XXIV.—Favus.....	115
XXV.—Trichophytosis.....	122
XXVI.—Phytosis Versicolor.....	131
XXVII.—Impetigo Contagiosa.....	135

CHAPTER	PAGE
XXVIII.—Erythema.....	138
XXIX.—Intertrigo—Pernio — Para- trimma—Furuncles.....	139
XXX.—Lichen Tropicus—Nævus— Telangiectasis—Verrucæ..	145
XXXI.—Alopecia Areata.....	150
XXXII.—Erythema Multiforme— Erythema Nodosum.....	152
XXXIII.—Elephantiasis. (Arabum.) ..	155
XXXIV.—Keloid — Lichen Planus — Lichen Ruber — Lichen Scrofulosorum.....	157
XXXV.—Pemphigus—Molluscum Fi- brosum—Molluscum Con- tagiosum.....	164
XXXVI.—Purpura—Prurigo.....	169
XXXVII.—Scleroderma—Scleriasis.....	173
XXXVIII.—Strophulus—Vitiligo.....	176
XXXIX.—Gonorrhœa.....	181
XL.—Gleet.....	200
XLI.—Complications of Gonorrhœa.	205
XLII.—Chancroid.....	217
XLIII.—Bubo.....	235
XLIV.—Syphilis.....	241
XLV.—Treatment of Syphilis.....	279

CUTANEOUS MEMORANDA.

CHAPTER I.

ANATOMY OF THE SKIN.

THE skin is composed of three layers : an external horny layer called the cuticle or *stratum corneum*, composed of flat, dry, non-nucleated cells ; a middle mucous layer or *stratum malpighii*, made up of irregularly globular nucleated cells, covered with fine projections or *prickles*. The deeper cells of this layer are somewhat cylindrical, and contain pigment, varying in amount in different races of men. The two outer layers constitute the epidermis. The internal layer, or true skin, called *derma* or *corium* (*cutis vera*), is composed mainly of fibers of connective and yellow elastic tissue, the connective tissue fibers greatly predominating. These latter give strength to the skin, while the yellow fibers endow it with elasticity. The outermost portion of the corium is not smooth, but covered with projections called *papillæ*, of varying size and

contour. Their structure is the same as that of the corium but denser. The largest are found on the nipple and the corona glandis, the next in size on the palmar surface of the fingers, while the smallest occur over the general surface of the body.

BLOOD-VESSELS.

The *blood-vessels* of the skin include arteries, veins, and capillaries. The arteries proceeding from beneath ramify loosely in the deeper layers of the skin, and give ascending branches, which become capillary and form a second and more superficial plexus, from which again loops extend into some of the papillæ; returning, the capillaries unite to form veins, and as such run along the under surface of the skin, or enter the deeper tissues.

LYMPHATICS.

The *lymphatic* vessels form a plexus in the deeper portions of the derma, from which branches run outwardly forming a second or superficial plexus, from which again capillary loops are given off to the papillæ.

NERVES.

The *nerves*, branching off from the larger nerve trunks underneath, terminate in the skin

in several ways. Some deeply seated end in oval extremities called Pacinian corpuscles, the precise function of which is unknown. Others proceed outwardly, and terminate in the papillæ, especially those of the fingers, in bulbous expansions called Meissner's corpuscles. In these resides the special sense of touch. Other fine nerves pass through the papillæ, and terminate among the cells of the stratum malpighii. These latter are nerves of common sensation. In addition, certain fine fibers are distributed to the blood-vessels, and to certain special organs, as the sweat glands, sebaceous glands, hair-follicles, and muscles.

THE SUDORIPAROUS AND SEBACEOUS GLANDS.

The *Sudoriparous* or sweat glands are organs which consist of a tube convoluted into a *glomerulus* or knot at its deeper extremity, but whose free ends pursue a somewhat flexuous course outwardly, and passing through the epidermis, open upon the surface. The untwisted tubes have an average length of 6 mm. ($\frac{1}{4}$ "). Their number has been estimated at two millions, giving, therefore, in aggregate, a length of nearly eight miles of perspiratory tubing. The sweat glands are formed by inversion of the epi-

dermis during foetal life. The *Sebaceous* glands likewise formed by ante-natal inversion of the epidermis, are of three sorts : *First*, glands of simple structure and insignificant size, occurring as offshoots or appendages of the hair follicles, into which they open. *Second*, those of more complex structure and larger size, and having rudimentary hairs connected with them, the hair follicle and gland having a common opening on the surface. *Third*, those which are still more complicated and larger, without hairs, and opening directly upon the surface. The first are found in connection with coarse hair of the head, beard, genitals, etc. The second upon the nose, forehead, cheeks, etc., and the third upon the internal surface of the prepuce, and behind the corona glandis, and upon the nipple, labia minora, and vestibulum vulvæ.

HAIR-FOLLICLES.

The *Hair-follicles*, also foetal involutions of the epidermis, consist of sacs running down from the surface to various depths in the derma, and sometimes beneath it. Outwardly they consist of two layers of condensed connective tissue. In the outer layer the fibers have a longitudinal, and in the inner layer a

circular direction. Internal to these are two cellular layers, the outer one corresponding to the stratum malpighii, and the inner one to the stratum corneum. These are known as the inner and outer root-sheaths. At the bottom of the follicle is a small projection called the *papilla*.

MUSCLES.

The *muscles* of the skin are of the smooth or unstriped variety. They arise from the walls of the hair-follicle just below the sebaceous gland, and proceed upward in an oblique direction, sometimes bending round the gland, and are inserted into the uppermost portions of the derma, just beneath the papillæ. One, two, or more may be attached to each follicle. Smooth muscular fibers unconnected with hair-follicles are found in the scrotum, prepuce, about the female genitals, the nipples, face, and to a limited extent on other parts.

The APPENDAGES of the skin are the HAIR and NAILS.

THE HAIR.

The *hair* consists of a tapering cylinder partly intra-cutaneous, partly aerial. The portion

within the skin, imbedded in the hair-follicle, is called the root. Its deep end is somewhat bulbous, and embraces the papilla of the follicle, from which it derives its nourishment and means of growth. Mainly cellular at its deepest portions, the hair soon becomes differentiated into three concentric layers, which are, externally, a layer of flat epithelial cells, next a thick layer of fibers, or very long fusiform cells, and internally a pith or medulla, consisting of nucleated cells. These central cells are often absent in the hair of the head, and are proportionately most developed in the hair of the beard and genitals. The middle or fibrous layer is the seat of the hair pigment, which exists in varying amount on different persons. The hair may be regarded as modified or altered epidermis. It is unnecessary to refer to its peculiarities as regards local distribution, these being familiar to all.

THE NAILS.

The *nails* may also be regarded as altered epidermis. They consist of three layers, a thin external layer of non-nucleated cells, a thick middle layer of nucleated and striated cells, and an internal layer of nucleated and pigmented cells. The deep surface of the nail

is not smooth, but possesses ridges and grooves. The former project down into the bed of the nail, while the latter receive linear projections from what corresponds to the papillary portion of the derma. The interlocking of these ridges and grooves accounts for the firm adherence of the nail to the nail-bed.

CHAPTER II.

PHYSIOLOGY OF THE SKIN.

THE skin serves as the limiting membrane of the body, and as a protection to the organs and tissues beneath it. Its *stratum corneum* being impervious to fluid prevents the softer tissues absorbing too much water from a bath, and on the other hand curtails the exhalation of moisture from the surface. A body deprived of the horny layer of the epidermis would soon desiccate and die. The *sudoriparous* glands regulate the temperature of the organism, and to a certain extent act as excreting organs, removing daily an appreciable amount of urea from the system, together with other organic and inorganic substances. The *sebaceous* glands excrete an unctuous sub-

stance called the *sebum*, which serves to lubricate the hairs and skin. The *blood-vessels* and *lymphatics* convey suitable nutriment to the skin, and remove the waste products connected with disassimilation. The *nerves* which terminate upon the blood-vessels regulate the blood supply of the skin ; those which are distributed to the sudoriparous and sebaceous glands undoubtedly influence the secretions of these organs ; while those which can be traced among the cells of the *stratum malpighii* are nerves of common sensation, and serve to convey to the more central organs the sensations of heat, cold, pain, pressure, etc.

On the other hand those which terminate in the *papillæ*, particularly of the fingers, are organs connected with the special sense of *touch*, and enable us to judge of the physical properties, such as hardness, softness, roughness, smoothness, etc., of many bodies with which they are brought into mediate contact. The skin as a whole must not be regarded as an independent tissue, but as one holding the closest relations with the rest of the economy, being influenced in great measure by general morbid conditions, and in turn contributing its share, when in a healthy state, to the general well-being of its owner.

CHAPTER III.

PATHOLOGY OF THE SKIN.

UNDER the term Pathology may be embraced a consideration of the pathological *processes* which involve this organ, and also the results of these processes, namely, the *lesions*. The two must not be confounded. The morbid actions, of which the skin is the seat, are in the main the same as occur in other organs, and are usually dependent upon modifications of blood supply or of innervation. The two are so intimately associated that it is often difficult, indeed almost impossible, to determine which is primarily affected. Dependent upon these modifications we have hyperæmia, inflammation, and anæmia; and, secondarily, hypertrophy, exudation, atrophy, or heterology. Besides these we may have functional derangements of the nerves of common sensation, and of those of special sense. The lymphatics also act an important *rôle*, not yet well understood, in connection with the preservation of the integrity of the cutaneous functions, and when the seat of primary derangements, are important elements in dermal pathology.

The derangements of one or several of these functions lead to the development of what

are called the special *lesions* of the skin. The most important of these are :

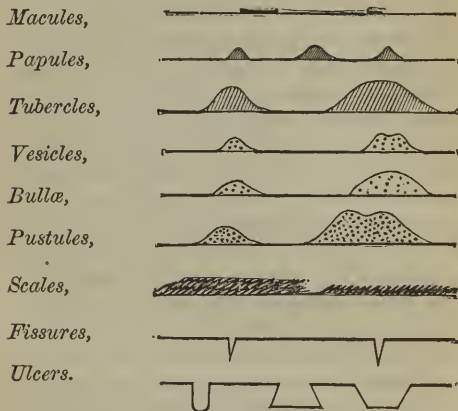


FIG 1. SCHEME OF THE PRINCIPAL CUTANEOUS LESIONS IN PROFILE.

MACULES are small circumscribed discolorations of the surface, attended with very slight, if any, elevation of the surface, and are dependent upon either congestion, hemorrhage, vascular dilatation, excess or absence of pigment, or the presence of fungi.

PAPULES are small solid elevations of the skin, of varying size, shape, and color.

TUBERCLES are likewise solid elevations, of larger size than papules.

VESICLES are elevations of the horny epidermis by serous or plasmic fluid, and contain a few leucocytes. They may be acuminate, flat, or umbilicated.

BULLÆ are large vesicles.

PUSTULES are elevations of the epidermis by pus, and may also be acuminate, flat, or umbilicated.

SCALES are collections of cells of the stratum corneum, more or less altered by disease.

FISSURES are linear solutions of continuity of varying length and depth.

ULCERS are solutions of continuity, of varying depth and outline, with perpendicular, sloping, or overhanging edges.

These lesions in various combinations, together with certain others, secondary and dependent upon them, to be noticed later, constitute the objective features of what is termed a "skin disease." The lesion is not the disease. The disease comprises one or more lesions, with such concomitant phenomena as may stand in a causative relation to the lesion, or may be a result of it. The lesion itself may be an insignificant portion of the

difficulty for which the patient seeks relief. This should always be borne in mind.

MACULES are met with in Angioma, Chloasma, Erythema, Ephelis, Rosacea, Leprosy, Morphœa, Nævus, Pellagra, Purpura, Roseola, Scarlatina, Scorbutus, Scrofula, Syphilis, etc.

PAPULES in Acne, Eczema, Lichen, Prurigo, Rubeola, Scabies, Strophulus, Scrofula, Syphilis, Variola, etc.

TUEERCLES in Acne, Keloid, Molluscum, Leprosy, Scrofula, Syphilis, Urticaria, etc.

VESICLES in Eczema, Herpes, Impetigo Contagiosa, Scabies, Syphilis, Sudamina, Variola, Varicella, Zoster, etc.

BULLÆ in Pemphigus, Leprosy, Syphilis, etc.

PUSTULES in Acne, Ecthyma, Eczema, Furuncles, Glanders, Scrofula, Syphilis, Variola, etc.

SCALES in Eczema, Ichthyosis, Pityriasis, Psoriasis, Syphilis, Scrofula, Trichophytosis, etc.

FISSURES in Eczema, Leprosy, etc.

ULCERS in Intertrigo, Scrofula, Syphilis, Traumatisms, etc.

The lesions may be termed the objective symptoms or signs of disease; and the stu-

dent should as soon as possible familiarize himself with their generic features, and then study the modifications which appear in the several affections to which they belong.

CHAPTER IV.

SYMPTOMATOLOGY.

THE lesions of the skin may be, and frequently are, accompanied and connected with other abnormal phenomena of a subjective character. These are *general* or *local*. The *general* are those which may be embraced under the ordinary name of febrile action, with all that this term implies, namely, malaise, loss of appetite, headache, impaired digestion, increased heat of surface, increased frequency of pulse, etc.

The *local* symptoms are referable to distant organs, or to the skin itself. Disease of other organs may be provocative of skin lesions, and *per contra*, skin lesions may act as causative agents of derangement of other parts. The alimentary canal, the liver, the generative organs, the kidneys, etc., may reflect their irritation to the surface; on the other hand,

extensive lesions of the skin may induce important changes in other parts of the economy.

The principal subjective symptoms connected with the skin are Pain, Hyperæsthesia, Anæsthesia, and Pruritus.

Pain is not a frequent accompaniment of cutaneous diseases, and is met with chiefly as a hot or burning sensation in connection with acute inflammations of the skin, or as a neuralgic pain in certain cases of Zoster. If the pain is severe and its cause cannot be readily removed, it must of course be treated symptomatically—that is, by the usual sedatives. The pain accompanying Zoster demands the same treatment that a similar neuralgia would if unaccompanied by eruption.

Hyperæsthesia is the prominent symptom of the affection called Dermatalgia, in fact constitutes its totality so far as symptoms are concerned. It is also encountered in certain cases of Leprosy, and in other affections.

Anæsthesia of the integument is encountered in several affections, which more properly belong to the domain of the neurologist, but is of frequent interest to the dermatologist, in connection with Syphilis and Leprosy. The lesser degrees of deviation from normal sensibility, however, are not

uncommon in a number of cutaneous affections.

Pruritus.—This is one of the most important of the subjective symptoms accompanying diseases of the skin. It varies in intensity, in duration, and in location. In its mildest degree it may be little more than a pleasurable sensation, while in the severest development it may render life a veritable burden. Its duration may be ephemeral, as when it accompanies a temporary urticaria, or it may last for weeks or months as a prominent symptom of Phthiriasis or Scabies. It may even endure for years as an accompaniment of true Prurigo. It may be general or localized. The causes of pruritus are various. On the one hand, the trouble may be due to disease of some of the internal viscera, the irritations of which are reflected upon the skin. On the other hand, the cause of the pruritus may be located in the skin itself. In this latter case the cause may be the presence of animal parasites, or the existence of some idiopathic affection of the skin, as an eczema, or a prurigo. As a rule pruritus is worse at night than during the day. In the treatment of this distressing symptom or complication, the in-

genuity of the physician will often be taxed to the utmost. The first points are to discover the cause, and to remove it if possible. When the itching accompanies temporary derangement of the liver or uterus, a blue pill, or a nervine may accomplish all that is desired; but if it depends upon organic disease of these or other organs, palliatives are frequently our only resource. If the pruritus be sufficiently severe to demand treatment, and the nature of the case precludes expectation of a radical cure, we can sometimes afford marked relief by certain topical means, among which may be mentioned warm baths on retiring, the efficiency of which may be increased by the addition of an alkali or an emollient, such as carbonate of soda or linseed meal, in the proportion of one pound ($\frac{1}{2}$ kilo.) to 25 gallons (*hectolitre*) of water. A sponge bath of vinegar or borax may also be tried, or, if the pruritus be local, the following anti-pruritic combination may be of service:

Grams.

R \bar{y}	Chloral.....	
	Camphoræ.....	āā 4. (3j)
	Ungt. aq. ros.....	30. (3j)

This should never be applied to an excoriated

surface on account of the pain it will produce. In many cases it will have to be used much weaker than the strength above given.

If these means fail, resort must be had to direct sedatives, as opium, hyoscyamus, etc.

If itching is caused by vermin it ceases upon their destruction, and when dependent upon eczema, with the disappearance of the eruption.

If the pruritus be at all severe it necessitates scratching, and this is often practiced with such vigor that more or less mechanical wounding of the integument results. Hence, secondary lesions, due to the scratching, are frequently met with, varying in character and intensity. These may collectively be termed "scratch-marks," and consist, in milder cases, of little black points, slightly or not at all elevated. They are produced by the desiccation of a small droplet of blood, the result of a nail wound. If a long scratch has been made, we may find linear ridges of dried blood, and in severe cases excoriations, pustules, and even ulcers. In long-standing pruritus general darkening of the surface may occur. These scratch-marks may be the only visible lesions of the skin, and their cause should be properly appreciated, and carefully distinguished from the idiopathic lesions described in the last chapter.

CHAPTER V.

DIAGNOSIS.

THE importance of a correct diagnosis cannot be overrated ; its difficulties, however, have been. The lesion being directly under the eye, a diagnosis should be easier in this class of affections than in any other, and as a rule, it is. All that is necessary is, in the first place, to determine the character of the lesion, that is, to ascertain whether it is a macule, papule, or pustule, etc. This offers little difficulty. When accomplished, turn to the table on page 12, and see in what diseases the given lesion occurs. If more than one lesion are present, ascertain from the table what diseases present the lesions under notice ; and when this is done, carefully read the special descriptions of the diseases themselves. If this plan is systematically followed it will be surprising how soon one may become a good cutaneous diagnostician. It must be remembered, however, that cases sometimes occur which would puzzle the most skillful dermatologist. No pains however should be spared in the effort to arrive at a correct diagnosis, as upon this will depend in great measure the selection of judicious treatment.

CHAPTER VI.

NOMENCLATURE.

Dermatological nomenclature is, unfortunately, in an extremely inchoate condition, and is the great bugbear of those who give but superficial attention to the subject. Until however this matter shall have been subjected to thorough revision by competent authority, we must make the best use we can of the materials at our command. In dermatology we deal with four sets of phenomena, namely, diseases, affections, lesions, and symptoms. Naturally a name which is applied to one of these should not be used in connection with either of the others; this has not always been the case, and as a consequence we often find the same name given at one time to a lesion, and at another to a disease. Further, a single name has been applied to different diseases, and a given disease has received several names. In the following pages we shall endeavor to be consistent in this respect, and shall select from among the names proposed those which appear to us most appropriate, and shall add but a single new term to the already over-burdened glossary of dermatology. The distinction

between a *disease* and an *affection* may be thought too fine, but we will illustrate our idea by a single example: Syphilis is a *disease*; but a macular, papular, or pustular eruption depending upon it is an *affection*. Lesions and symptoms have already been considered.

CHAPTER VII.

CLASSIFICATION.

THE object of classification in dermatology, as in other branches of science, is to enable one to obtain at a glance a comprehensive view of the subject by grouping together the different diseases, according to their several analogies. As the affections of the skin present various kinds of phenomena, such as lesion, pathological process, infiltration, exudation, anatomical location, pruritus, pain, local or central origin, etc., an equal number of classifications might be devised. All of these various plans may be pursued with advantage, provided their several parts are consistent with each other. No one of them, however, should be exclusively employed. The principal advantages to be gained by classification are facility in diagnosis, and suggestion as to

treatment. These two points have not yet been harmonized in a single classification, and from the nature of the subject do not at present appear to be capable of union in a single scheme, at least such union has not as yet been successfully accomplished. A double classification is therefore advisable.

The botanist will tell you that the classification of De Candolle, the so-called natural classification, has superseded that of Linnæus ; but he will also tell you that the latter serves as a hand-maiden to the former. By the Linnæan, the name of a plant unknown to the student is most readily discovered, by that of De Candolle its relation to other members of the vegetable kingdom is most readily understood. So in dermatology a classification which helps us to diagnosis, that is, a naming of the disease under consideration, is of the first importance.

The classification of Plenck and its modifications, based upon the character of the lesion, attain this to a certain extent ; not completely, however, as a given disease, *eczema* for example, is there confined to the class *vesiculæ*. As eczema sometimes presents pustules or papules as its most prominent lesion, the student relying entirely upon Plenckian classi-

fications would often be sadly at fault. As a substitute, therefore, we offer the table upon page 12 and the chapter on Diagnosis as the best guides with which we are acquainted.

A classification, however, based upon the supposed nature of the affections, and indicating their relations to each other, is, it seems to us, the one which should demand the greatest share of attention from those devoting their attention to this class of diseases. A rude attempt of this sort was made a century ago (Lorry, in 1777). Subsequently, Alibert elaborated a similar scheme. This, at the time, owing to certain peculiarities of nomenclature, did not meet the encouragement which it deserved. From Alibert's time no similar effort was made, until we, a few years ago, attempted to classify the diseases of the skin in the manner indicated. That this plan will have to be modified in many of its details, as our knowledge of cutaneous diseases advances, admits of no doubt. It is not perfect, but it will, we think, prove of assistance to the practitioner in arranging his plan of treatment for any given affection, and it will stimulate research, among those given to such pursuits, for facts substantiating or negating the propositions we assume. We arrange, therefore, the com-

moner forms of cutaneous eruptions in the following classes :

Class I. Diathetic affections.

“ II. General non-diathetic affections.

“ III. Reflex affections.

“ IV. Local affections.

“ V. Affections of uncertain nature.

By *diathetic* affections we understand such as are the outward manifestations of a general morbid constitutional condition, or diathesis, which diathesis may be hereditary or acquired, and lasts indefinitely or for life.

The *general non-diathetic* affections are those which occur during, or in consequence of a general morbid condition, not hereditary, and of temporary duration.

The *reflex* affections are those which depend directly upon nerve lesion, or else occur through the medium of reflex action, as secondary to pre-existing disease or derangement of other organs.

The *local* affections have no direct connection with abnormal conditions of the blood, nerves, or viscera.

The affections of *uncertain nature* are those which we cannot place with any degree of certainty in previous classes.

In assigning the various diseases to these

different groups, we have been guided by what seemed to be their probable nature. In many cases the probabilities were so strong as to amount to absolute conviction ; in other cases, the weight of probability seemed to be decidedly in favor of the assigned position ; while others have been frankly marked doubtful.

CLASS I.

DIATHETIC AFFECTIONS.

SYPHILIDES.

Varieties.

- Macular.
- Papular.
- Tubercular.
- Vesicular.
- Bullous.
- Pustular.
- Squamous.

SCROFULIDES.

Varieties.

- Erythematous.
- Corneous.
- Pustular.
- Tubercular.
- Phlegmonous.

RHEUMIDES.

Varieties.

Eczema.

Psoriasis.

Pityriasis.

LEPROSY.

Varieties.

Macular.

Tubercular.

Anæsthetic.

ICHTHYOSIS.

CLASS II.

GENERAL NON-DIATHETIC AFFECTIONS.

Eruptive Fevers.

Erysipelas.

Scorbutus.

Malignant Pustule.

CLASS III.

REFLEX AFFECTIONS.

Acne.

Rosacea.

Urticaria.

Zoster.

Herpes (labialis, preputialis, etc.)

Xanthoma. (?)

Chloasmata (some).

CLASS IV.

LOCAL AFFECTIONS.

A. PARASITIC.

Scabies.

Phthiriasis.

Favus.

Trichophytosis.

Phytosis versicolor.

Impetigo contagiosa. (?)

B. NON-PARASITIC.

Erythema.

Intertrigo.

Pernio.

Paratrimma.

Nævus.

Furuncles.

Verrucæ.

CLASS V.

Erythema multiforme.

Erythema nodosum.

Elephantiasis (*Arabum*).

Keloid.

Lichen planus.

Lichen ruber.

Lichen scrofulosorum.

Molluscum fibrosum.

Molluscum contagiosum.
Pemphigus.
Prurigo.
Purpura.
Scleroderma.
Scleriosis.
Strophulus.
Vitiligo.

Concerning the foregoing, it may be proper to make a few remarks. The term Rheumides is applied to the affections which the French embrace under the names dartrous or herpetic. The existence of such a diathesis is denied by some, but the weight of evidence seems to us to be decidedly in its favor. It includes the affections known in this country under the vulgar name "Salt-rheum." The Scrofulides include the affections frequently known under the name of Lupus, together with one or two others. The Syphilides will be considered in the venereal portion of this book.

The second group includes affections which are fully considered in all works upon general medicine. They rarely come under the care of the dermatologist, and will not receive further consideration in this work.

The fifth class unfortunately contains a large number of affections which the present state of science will not permit us to definitely assign to other groups. Their proper positions are problems of the future.

CHAPTER VIII.

THE SCROFULIDES.

UNDER the term scrofulides we shall describe certain affections which appear to us, in common with the majority of dermatological authors, to be dependent upon that ill-defined condition to which the name Scrofula has been applied. They include the affections described by many authors under the somewhat vague name of Lupus. The best description of these affections that in our judgment has yet appeared is that by Hardy, and upon his description we shall in the main rely in what follows concerning them, our own clinical experience being more in conformity with the views of Hardy than with those of any other writer.

General Characters of the Scrofulides.—These affections present a number of general characters which separate them as a class from other cutaneous affections, and which, if prop-

erly appreciated, will enable us in most instances to recognize them without difficulty. While some varieties are more superficial than others, they all attack the true skin beneath the epidermis, and may even penetrate to a considerable depth below it. Their color is usually a reddish violet; less brown than eruptions of syphilis, and not as red as that of an acute dermic inflammation. Their course is exceedingly chronic, and usually painless. They sometimes ulcerate, but not always. In either case, however, they leave indelible scars. The ulcers if present do not display the round, clean-cut appearance of syphilitic ulcers, but are more irregular in outline, and with uneven borders. The bottom of the ulcer may be fungous and bloody, or with pale, unhealthy, and sometimes exuberant granulations. The crusts which cover the ulcers are thick but not very hard, and of a greenish-black color. Crusts in some cases form even in the absence of ulceration. In others, instead of crusts, there are fine adherent scales.

The progress of the scrofulides is slow; uncured cases of twenty or more years' duration are not infrequently seen. Occasionally they recover spontaneously, but their usual course is to spread for an indefinite period unless

arrested by proper treatment. The superficial varieties cause deformity from the cicatrices which follow them. The deeper varieties may terminate fatally.

The *varieties* have already been indicated (p. 24).

Erythematous Scrofulide.—This form is characterized by spots of well-marked redness of peculiar tint, more or less covered with fine scales, not sufficiently abundant, however, to mask the heightened color. The patches are in slight relief above the healthy skin, but upon recovery the cicatrices are depressed. The face is the favorite seat of the erythematous scrofulide ; it is also encountered upon the hands, feet, and elsewhere. The patches may be single or multiple. There is very little, if any, heat, pain, or itching. The progress of the affection is exceedingly chronic, and as the patch increases in magnitude there is a tendency to involution in the parts first affected which results in a depressed scar, the area of the scar extending with the duration of the lesion.

The diagnosis is in general easy, the only affection with which it is likely to be confounded being chronic erythematous eczema. The history of the case, the partly cicatrized

portions, if the case be of very long standing, the absence of exudation and of pruritus, will in most instances enable it to be readily distinguished from eczema.

This variety being the most superficial of the scrofulides, is readily curable, if not already too extensive, and if judicious treatment is employed with sufficient perseverance. A favorable result may generally be secured by frequent frictions with *sapo viridis*, employed daily until the amount of reaction produced has reached the limit of comfortable endurance. A few days' rest from treatment should be followed by renewal of the friction, and this should be repeated until the entire infiltration is removed. A somewhat milder application is the *spts. saponatus kalinus*, prepared as follows :

R̄	Saponis viridis.....	200.	(℥vj)
	Alcohol.....	100.	(℥iij)

Let it stand for twenty-four hours, filter, and add *spts. lavendulæ, q. s.*

Glacial acetic acid applied two or three times a week is also very effectual, and we have had good results from energetic friction with the following :

R̄	Saponis viridis.....	250.	(℥viij)
	Glycerini		
	Olei cadini.	āā 50.	(℥iss)
	Ol. rosarum.....	q. s.	

M

A twenty-five or even fifty per cent. solution of caustic potassa applied about once a week is still more effective. When the lesion is quite small, excision is the quickest and best way of disposing of it.

THE CORNEOUS SCROFULIDE.

This variety differs little from the one last described, except that its color is not quite so marked, and there is more prominent implication of the follicular apparatus of the skin.

The affection is characterized by the appearance of one or more circular and slightly elevated patches. There are few scales upon the surface, but instead a multitude of little elevations or asperities. Upon examination with a lens we find that the orifices of the sebaceous glands are enlarged and open, and that the asperities are little plugs of hardened sebum projecting from them. If removed they are replaced by new secretion, which soon forms, fills, and obstructs the duct. The usual seat

of this variety is the face. After a varying period, which may be shortened by proper treatment, the sebaceous secretion lessens and finally disappears, and nothing remains but the depressed cicatrices.

Diagnosis.—This affection does not resemble, and is not liable to be mistaken for any other, by a careful observer.

Treatment.—The *treatment* that will prove most effectual is the use of the strong alkaline preparations mentioned in connection with the last variety.

THE PUSTULAR SCROFULIDE.

This variety commences as a reddened patch upon which in a short time are developed a multitude of little pustules, which preserve their integrity for some days or even a week, and then dry into somewhat yellowish crusts.

The patches increase by the development of new pustules around the crusts, which breaking, augment by their secretion the area of the disease. The crusts are very adherent, but when removed disclose shallow ulcers with irregular borders, and filled with pale, flabby, and uneven granulations. In some cases the surface of the ulceration presents small, hard, warty elevations.

The nose is the favorite seat of this variety, but it may be found upon the cheeks, and more rarely upon the limbs. Its progress is slow and unaccompanied with pain or itching.

Diagnosis.—At its commencement this variety might be mistaken, by an unpracticed eye, for a pustular eczema, and later for a pustular syphilide. Its indolent nature and deeper seat should serve to distinguish it from the former. From the latter, however, the diagnosis is not always easy.

In syphilis the crusts have a more greenish aspect, and the ulceration is more regularly circular, and the lesion progresses more rapidly.

The history of a primary infection, and other evidences of syphilis may afford aid in determining the nature of the lesion.

Treatment.—This, of all the scrofulides, is the one most amenable to treatment. Scrape with a “sharp spoon” (Fig. 2) the floor and edges of the ulcer thoroughly so as to remove as much of the morbid tissue as



FIG. 2.
SHARP
SPOON.

possible, and then to make assurance doubly sure, apply a thin layer of deliquesced chloride of zinc and cover with cotton-wool. If the patch is small, one or two centimeters in diameter, the ulcer will heal with very little or no suppuration, and the cotton will drop off in ten days or two weeks, leaving a perfect cicatrix. The actual cautery properly applied is still more effective than the zinc.

TUBERCULAR SCROFULIDE.

Under this term may be included two quite different varieties. In both we find the trouble commencing by the appearance of distinct papules or tubercles; but in one the process is comparatively superficial, and accompanied with but superficial ulceration, or with none at all; in the other the lesion invades the deeper tissues. We shall therefore distinguish them as the superficial and the deep tubercular scrofulides.

THE SUPERFICIAL TUBERCULAR SCROFULIDE.

This variety is characterized by soft, indolent, elastic tubercles from the size of a large pin-head to that of a pea. They are semi-transparent, yellowish or brownish violet, and are usually found in groups forming circles or

segments of circles. They may be found upon any part of the body, but their favorite seat is some part of the face. This variety is exceedingly chronic, lasting for several years, the patient meanwhile, perhaps, appearing to enjoy the best health. Ultimately they disappear by interstitial absorption, leaving depressed cicatrices, or undergo a superficial ulceration with a like result.

Diagnosis.—The only affection liable to be mistaken for the one under consideration is a papular or tubercular syphilide in groups. In this latter disease there are usually a number of groups, while in the scrofulide there is generally but one; their progress is more rapid and their color more coppery. Besides there is usually a history of previous syphilitic infection.

Treatment.—If the lesions are so located that excision is practicable, this is probably the best procedure. If not, they may be destroyed by boring into them with needles (Fig. 2) upon which nitrate of silver has been fused, or more effectually by the actual cautery white hot.



FIG. 2.

IRIDO-PLA-
TINUM
NEEDLE.

DEEP TUBERCULAR SCROFULIDE.

This is by far the most important and most serious of the scrofulous lesions of the skin. It makes its appearance often by a single tubercle of a semi-translucent bluish-brown color. For a year or more this may slowly but gradually increase in size. After an uncertain period ulceration occurs at its center. This increases both superficially and deeply, invading the subjacent tissues, and even the bone. Five or ten years may elapse before this occurs. The lesion rarely, if ever, attacks any part but the face, and its favorite seat is in the neighborhood of the eyes. During the progress of the disease additional tubercles may arise in other parts of the face, about the other eye, the ears, the chin, etc. The disease is in general painless, but death is the ultimate result unless the progress of the malady be checked. In the majority of recorded cases, pulmonary phthisis has preceded the fatal termination. In the others, general asthenia alone may mark the closing scene.

Diagnosis.—The only diseases with which this affection is liable to be confounded are syphilis and cancer. Syphilis is to be distinguished by the previous history and the

more rapid progress of its lesions. A syphilitic ulceration of five years' standing, unless connected with carious bone, is an exceedingly rare, even if it be a possible occurrence; a scrofulous ulceration of that duration is by no means uncommon. The cancerous ulcerations of the face are usually, if not always, single; the scrofulous may be multiple. We have seen as many as six different foci of disease in a single case. Under the name of Rodent ulcer, some modern writers have included and confounded this affection with epithelioma. The two are distinct in their appearance, course, and histology. Rodent ulcer as a distinct pathological entity we do not believe exists. As a descriptive expression this term may be used, as by Erasmus Wilson, to designate any eroding ulcer, whether it be of scrofulous, syphilitic, or cancerous nature.

Treatment.—There is but one method of treatment that promises any hope of a successful issue. This is, thorough excision of all the morbid tissue that the knife can reach, and as an additional safeguard, cauterization of the wound with the chloride of zinc, or the actual cautery.

THE PHLEGMONOUS SCROFULIDE.

This variety commences with the development of a little tumor within the skin, which slowly but gradually increases until it attains perhaps the size of an almond. The skin covering the swelling is of a violet red tint. Little by little the tumor softens, and at length fluctuation announces the presence of pus. The skin gradually thins, and at last breaks and gives exit to an ill-conditioned, scrofulous pus. A crust may form over the opening damming up the fluid, which bursts out anew at some other point. In this way several openings may form. These lesions are in reality small, chronic, dermic abscesses. If undisturbed, the suppuration and discharge, after continuing for an indefinite period, months perhaps, gradually lessen, and finally cease. The ulceration heals, leaving a bluish scar, which finally becomes white. Sometimes the abscess does not open, but the pus is absorbed and no ulceration occurs. In these cases also, we have the diffused, irregular scrofulous cicatrix.

Diagnosis.—This presents little difficulty; the only lesions that in any way resemble it are the suppurating tubercles that sometimes form in severe cases of acne. These latter,

however, are usually multiple, and have a much more rapid course.

Treatment.—At the commencement, it is sometimes possible to produce resolution, by the application of the *ungt. potassii iodidi*. If, however, softening has occurred, it will be well to exhaust the pus with a hypodermic syringe, and to instill a drop or two of a dilute solution of iodine. If the abscess has already opened, the parts should be freely stimulated with iodine.

GENERAL TREATMENT OF THE SCROFULIDES.

General—that is, constitutional treatment—should never be neglected in the management of the scrofulous affections of the skin; as in almost every case benefit will accrue from the use of *ol. morrhuae*, and the various preparations of iodine and mercury. Iodine may be given in somewhat full doses, but mercury will prove most serviceable in extremely minute ones. Arsenic has never appeared to us to influence the course of the disease, and its use is a waste of time.

CHAPTER IX.

THE RHEUMIDES.

THE affections embraced in this group are among the most important of any with which we have to deal. Their importance depends upon their frequency and obstinacy. As they undoubtedly, in our judgment, depend upon an internal constitutional cause, it will be expedient to inquire a little into its nature.

The constitutional condition, or diathesis, to which we have given the name of rheumatic, corresponds to the dartrous or herpetic diathesis of the French, and arises, in all probability, from the retention in the blood of certain excrementitious substances, as uric and lactic acids ; in fact, the condition is one closely allied to those which are at the root of rheumatism and gout. The trouble arises not so much in the processes of assimilation and nutrition as in those connected with the retrogressive metamorphoses of tissue. Instead of the thorough conversion of waste albuminoid tissues into urea by the process of oxidation, there is partial failure, and as a result, a superabundance of imperfectly oxidized products. These are much less soluble than urea, and although

they exist in comparatively small quantity, are not completely eliminated by the kidneys, and hence tend to accumulate unduly in the blood. There are strong reasons also, for believing that the liver is the organ principally concerned in the conversion of uric acid into urea, and failure on its part to perform its full duty in this respect tends to bring about the condition of things in question. The excess of these excrements leads to irritation of the skin, and the production of the special affections which pertain to this diathesis.*

Eczema, Psoriasis, and Pityriasis, which depend upon this diathesis, possess the following features in common :

They are not contagious.

They are frequently general ; not, however, by simultaneous invasion of the surface, but by spreading from different foci.

They are frequently symmetrical.

They are usually chronic.

Their natural duration is indefinite.

They are obstinate, and do not yield readily to treatment.

* The complete argument in favor of this view is detailed in my *ELEMENTARY TREATISE ON DISEASES OF THE SKIN*. Macmillan & Co., New York, 1876.

They are frequently observed in several members of the same family.

They are frequently observed, in different forms, in different generations of a family.

Two or more forms may be present at the same time, or may appear successively.

They do not always preserve their individuality, but sometimes merge one into the other.

Relapses are frequent.

They sometimes alternate with affections of other organs, especially of the pulmonary and gastric mucous membranes, and of the joints.

They itch.

The lesions are always superficial.

They never leave cicatrices.

They are more or less amenable to certain definite methods of treatment, which have little if any effect upon other cutaneous affections.

Treatment.—The treatment of the affections dependent upon this diathesis includes the treatment of the constitutional condition, as well as that of the particular lesions. The former will now be considered, the latter in connection with the affections themselves. Accepting the view that the trouble depends upon an accumulation of certain excreta, our first object is to depurate the blood. This

may be effected in three ways, namely: by calling the kidneys, the bowels, or the skin itself into more vigorous action. If the kidneys happen to be diseased, attempts to increase their functional activity should be made with very great caution. If, however, they are in a healthy state, diuretics may be freely employed. Of these, the most useful in our experience are colchicum, digitalis, balsam of copaiba, propylamine, and unburnt coffee. If we are unable to depend upon the kidneys, we can frequently attain our object by free catharsis. For this purpose various purgatives are at our command, but the following combination has given us the most satisfaction:

R̄	Herb. violæ tricoloris.....	30.	(℥j)
	Fol. sennæ.....	15.	(℥ss)
	Aq. bullientis.....	1000.	(Oij)

M

Let it stand until cool and then strain; of this the average dose is a tumblerful once or twice a day. It should be given, however, in quantity sufficient to produce four or five evacuations daily, for two or three days, after which the dose may be diminished. The effect of active purgation with this infusion is, in some cases of eczema, very surprising, and is

due in part to the viola, as senna alone will not produce the same good results.

The excretory functions of the skin may be increased by diaphoretics, and especially by hot air or Turkish baths.

It is not alone necessary to remove the excess of excrementitious substances from the blood; they must, if possible, be prevented from forming in undue proportion. This may be accomplished to a certain extent by promoting oxidation; both by increasing the supply of oxygen, and its vehicles, the red blood corpuscles, and by stirring up the liver with hepatic stimulants. These latter agents include mercury in various forms, podophyllin, iris versicolor, etc. They may be employed for a considerable time, if given in sufficiently small doses.

As uric and lactic acids, when existing in undue quantity in the blood, tend to diminish the alkalinity of the serum, it will often be expedient to employ alkalies. Of these lithia is probably the most useful. It is well, however, to give with it a little iron for the purpose of keeping up the number of red blood corpuscles, which lithia alone, continued for some time, tends to diminish. The following is my usual formula:

R̄

Lithiæ benzoatis.....4. (3i)

Ferri benzoatis2. (3ss)

M Div. in Chart No. xxx.

S. One powder three times a day.

CHAPTER X.

ECZEMA.

THIS, the most frequent and most important of the rheumatic affections, commences in several ways and presents different aspects, according to the variety, stage, etc., that come under view.

The varieties depend, first, upon the character of the primitive lesion; second, on the locality; third, on the activity of the process, and fourth, on its duration.

Varieties as to Lesion.—These are five in number: Vesicular, Pustular, Papular, Fissured, and Exfoliative.

The *Vesicular* variety pursues the following course: After a preliminary redness or erythema, more or less localized, minute, closely-aggregated vesicles appear; these last for a day or two, rupture, and cover the surface

with their contained fluid, which dries into yellowish crusts. If the crusts are removed, a red eroded surface, exuding moisture, is exposed to view. The fresh secretion dries into crusts as before, and this process continues for a variable period. After a time, however, the secretion diminishes in amount, and the crusts become thinner, until gradually the secretion entirely ceases, and we find a dry red surface covered with fine desquamating scales. These gradually lessen until finally the skin returns to a normal condition. The period of redness and vesiculation is the first stage, that of secretion and crusting the second, while the dryness and desquamation constitute the third.

The *Pustular* variety commences with the development of small closely-packed pustules seated on a reddened base. These soon rupture, and their contents dry into greenish crusts. Removal of the crusts exhibits an excoriated surface similar to that in the former variety. The subsequent course of the eruption is the same as that of the vesicular variety.

The *Papular* form is recognized by the appearance of small red papules upon a reddened or sometimes scarcely altered surface. The papules may be discrete or aggregated, at first

without much if any exudation. By scratching, however, the papules become torn, and give issue to a slight discharge which dries into thin crusts. This condition is maintained for a variable period ; at length the tendency to papulation lessens, and with it the exudation, until finally the last stage of the eruption is indistinguishable from that of the other varieties.

The *Fissured* form is characterized by redness, followed by little fissures or clefts in the epidermis, exuding a certain amount of serous or sero-purulent fluid. After a time the secretion diminishes, then ceases, the fissures close, and the surface becomes dry, shiny, and scaly, and similar in aspect to that presented by the late stages of the other varieties.

In the *Exfoliative* form we first find active congestion, then exfoliation of the horny layer of the epidermis without formation of vesicles or pustules, and a plentiful exudation drying into yellowish or greenish crusts. The subsequent stages are like those of the vesicular and pustular varieties.

Varieties depending on Location.—These are chiefly eczema of the *scalp*, of the *beard*, of the *genitals*, and of the *hands and feet*.

Eczema of the Scalp.—This form is common in children, less frequent in adults. It is usually of the vesicular, pustular, or exfoliative variety. The exudation glues together the hair into masses, which sometimes attain considerable size, and present a disgusting aspect, especially when they become the home of pediculi, a very frequent accompaniment of eczema in the lower classes, who often fail to observe a requisite degree of cleanliness in their habits. Eczema of the scalp is frequently accompanied with adenitis of the lymphatic glands, situated upon the neck back of the posterior border of the sternocleido-mastoid. In these glands the inflammatory process may become quite active, with considerable pain and swelling. They rarely suppurate; subcutaneous abscesses of the scalp, however, are not unfrequent in young children, especially during the warmer months.

Eczema of the Beard.—If eczema occupies the region of the beard, the inflammatory process frequently extends to the hair follicles, and the integument between them may become more or less profoundly infiltrated, and accompanied with papules and tubercles. The hairs are sometimes surrounded by small accumulations of pus, and upon extraction the

roots are found swollen, and often covered with a thick white membrane, consisting of the inner and outer root-sheaths. This variety frequently becomes chronic, and constitutes one of the varieties of the mentagra, sycosis, or barber's itch of authors.

Eczema of the *genitals* involves the penis, scrotum, perinæum, and vulva. One of the main peculiarities of this variety is the tendency to remain moist even in the absence of much exudation, and when it becomes dry, it is apt, upon the slightest provocation, to resume its former condition.

Eczema of the Hands and Feet.—When the affection attacks the back of the hand, or dorsum of the foot, it presents no special peculiarities; but when it appears upon the palmar or plantar surface it is different. In these regions it usually assumes the vesicular, pustular, or fissured form, and the peculiarities which characterize it are due to the great thickness and strength of the epidermis covering these parts. The vesicles may attain considerable size, owing to the inability of the secretion to rupture the thick stratum corneum which confines it. In some cases rupture does not take place at all, but the pus undergoes absorption, and the elevated epidermis is finally

desquamated. If fissures are a prominent feature, they are both wider and deeper than when situated elsewhere, and correspond to the natural lines and furrows of the skin. Only a slight amount of exudation issues from the clefts, and owing to the frequent ablution of the parts, rarely forms crusts. The third stage is characterized by a dry, polished surface without much scaling, but exhibiting the lines of the skin in an exaggerated manner.

Varieties depending upon the *activity of the process* are *acute* and *subacute*. These names sufficiently indicate the character of the eruption. A given case of eczema, however, does not always preserve the character impressed upon it at the onset; an acute eczema after a time usually becomes subacute, and one that is subacute may at any later period take on an acute action.

The varieties depending upon *duration* are also *acute* and *chronic*. When the eruption passes through its second and third stages with commendable rapidity, say in three or four weeks, it may with propriety be termed acute; but if it halts in either of these stages, and exhibits a tendency to persist indefinitely, it is usually called chronic.

CHRONIC ECZEMA.

This form may commence with acute or subacute symptoms. In the former case, the eruption, having passed through the first stage, enters the second, and remains therein for weeks or months, often preserving its acute symptoms throughout; finally it passes to the third stage, and recovery takes place. More frequently, however, it passes through the first and second stages with satisfactory speed; but halts in the third, in which it may persist for years, varying its course by delusive appearances of recovery, or now and again reverting to a former stage.

Chronic eczema may, however, appear without having been preceded by the lesions which characterize the first and second stages of acute eczema; but instead, by a subacute condition from the beginning, marked by a slightly reddened and elevated, sometimes papulated patch, covered with fine, white, non-imbricated, and not very adherent scales.

A feature common to all cases of eczema is *infiltration*. This varies greatly in degree in different cases, being generally most pronounced in cases of long standing.

Subjective Symptoms.—An acute eczema, if at all extensive, may be ushered in by

febrile symptoms, which usually abate in a day or two. In the majority of cases no pyrexia is observed. Locally, however, a good deal of heat is experienced at first, which soon gives way to pruritus. This latter, varying in severity in different cases, may persist throughout the whole course of the eruption, and frequently proves the most annoying feature. The scratching to which it gives rise tends to irritate and aggravate the eruption, and to modify its appearance by the production of secondary lesions.

Diagnosis.—Although eczema is an extremely polymorphic eruption, its diagnosis is, in general, quite easy, provided the student has properly availed himself of the clinical opportunities now provided at most of the American colleges. The examination of a dozen cases will impress upon his mind, far better than anything written, the characteristic features of this eruption. In some cases, however, the eruption in the third stage may exhibit little else than a somewhat reddened, infiltrated patch, covered with rather large scales, something like the appearance presented by Psoriasis ; or there may be little infiltration and the scales quite small, and it will be hard to distinguish it from Pityriasis. In

either case an absolute diagnosis is not important, as the treatment would be substantially the same.

Complications.—Eczema may occur in patients who are scrofulous or syphilitic. In the former case it is apt to present the pustular form ; but, in the latter, it presents no special features, except that it rarely becomes chronic. It may also arise in persons predisposed to eczema, as an eruption secondary to scabies, being excited by the irritation accompanying the latter affection. The health of persons suffering from eczema is generally good, but rheumatic, gouty, bronchitic, and gastro-intestinal troubles may sometimes accompany or alternate with the eruption.

Prognosis.—The prognosis is variable, and is to be governed in the main by the length of time the eruption has lasted, and the number of separate attacks the patient has had, and also by the condition of the eruption itself. If this latter be in an acute condition, and has lasted for a short time only, the immediate prognosis is good, and the ultimate prognosis, (probability of relapse) will depend much upon the patient's mode of living. If the eruption however, be of long standing, or if there have been many relapses, both the immediate and ultimate prognoses are more unfavorable.

Treatment.—The treatment of eczema involves a consideration of the diathesis and general condition of the patient, and also of the stage, condition, etc., of the lesion. In other words, it must be both general and local.

General Treatment.—This must be governed by the principles laid down in the last chapter. Hygiene, diet, cathartics, diuretics, alkalies, chalybeates, or tonics, must be employed according to the indications furnished by each individual case. In many chronic cases arsenic is of service. This may be given in the form of Fowler's solution, in doses of three to ten drops, gradually increased, or in the shape of arsenite of iron or the iodide of arsenic—the former when marked anæmia is present, the latter in scrofulous cases.

Local Treatment.—This will depend entirely upon the nature of the lesion. In the first stage sedative lotions, such as a lotion of laudanum and subacetate of lead

R̄ Tr. opii.....
 Liq. plumbi. subacetatis āā 10. (f3ijss)
 Aq. rosæ..... 120. (f3iv)

M

will be of service until the vesicles have fairly ruptured and the stages of exudation and

crusts set in. In the *second* stage the *ungt. hydrarg. ammoniati*, to which a little compound tincture of benzoin has been added, will frequently be found the most useful application.

If however the eruption is extensive, it is safer to employ the *ungt. zinci oxid.* for fear that the mercurial application might produce salivation. If there be much crusting, the crusts should be previously removed with starch (not linseed) poultices. The parts should not be too frequently washed, but when ablution is necessary glycerine should be added to the water (a tablespoonful to a basin of water), and a perfectly bland soap employed.

In the *third* stage, characterized by dryness and scaling, benefit will be derived from the addition of tar to the ointment mentioned, either the ordinary *ol. picis* or the *ol. cadini*, as in the following formula :

R̄ Ol. picis *seu.* ol. cadini.4. (3j)
 Ungt. hydrarg. ammon.28. (ʒvij)

M

The strong odor of the tar may be masked in a measure by the addition of some essential oil, as rose, bergamot, etc. The ointment, in whatever form it may be used, should be thoroughly applied night and morning.

This treatment is adapted to cases in which there is not much thickening or infiltration of the derma. If these conditions however are present, it will be best to precede other treatment by alkaline applications varying in strength with the degree of infiltration. For this purpose a 2% to 5% solution of potash answers very well; or the *sapo viridis* applied with thorough friction may be used.

The *spts. saponatus kalinus* or the following

R \bar{y}	Saponis viridis	185.	(\bar{z} vj)
	Ol. picis		
	Glycerini	āā 30.	(\bar{z} j)
	Ol. rosmarini	15.	(\bar{z} ss)
	Alcohol	500.	(Oj)

M

may often be advantageously used instead of the simple potash or green soap.

The foregoing embraces the main points connected with the local treatment of eczema, but there are some special matters to which attention should be called. If the scalp be extensively affected, the cure will be hastened by cutting the hair short, as this abolishes the haunts of pediculi, and permits the remedial applications to be made more thoroughly. If the region of the beard be affected, and we have the men-

tagra-form eczema, with pustules surrounding separate hairs, it will be necessary to extract the affected hairs one by one, a task most readily accomplished by means of a pair of properly made forceps specially designed for the purpose, as shown in the cut (Fig. 4).



FIG. 4.
EPILATION
FORCEPS.

In eczema of the hands and feet, when the epidermis is greatly thickened, it had better be removed mechanically by scraping or rubbing it down with a file or sandpaper, after which the alkalies may be applied. While most eczemas are very amenable to treatment, some cases, happily the minority, will tax to the utmost the patience and skill of the physician.

CHAPTER XI.

PSORIASIS.

THIS affection, though not so frequent as eczema, is still one of great importance, inso-much as it is frequently characterized by a degree of obstinacy witnessed in but few other diseases.

It may be described as a constitutional and diathetic affection characterized by patches of infiltrated skin, covered with thick, silvery-white imbricated scales. The patches vary in number, size, configuration, and locality. At the commencement they may be quite small, merely papules covered with a thick white scale, the so-called psoriasis *punctata*; if larger, looking like little drops of wax or plaster, they constitute the *P. guttata*. If still larger, coin-sized, the affection is termed *P. nummulara*. If the patches be joined together, the term *P. diffusa* is applied; and if they cover pretty much all the surface, the expression *P. universalis* is appropriate. The disease may affect any portion of the surface, but its special points of election are the elbows, knees, and

hips. Upon these and other parts it frequently exhibits a remarkable degree of symmetry.

Course.—The affection, whether scant or extensive, is essentially a chronic affair, and if unrelieved by treatment may last for months or years. Even when caused to disappear by treatment, it is ever ready to relapse upon the slightest or even without any apparent provocation. As a rule it is worse in winter than in summer.

The eruption having once appeared is characterized by the patches mentioned. These are always dry, never exhibiting the moisture and discharge, or alternations of dryness and exudation that occur in eczema. If the scales fall, or are rubbed off, they are quickly renewed, and in two or three days exhibit the condition observed prior to their removal. After this condition has lasted for an indefinite period, retrogressive changes may occur, either spontaneously or as a result of treatment. In either case, the desquamation gradually lessens, the size and thickness of the scales diminish, the infiltration subsides, and the surface pales, until finally the normal condition is resumed, without leaving mark or sign to indicate the site of the late eruption.

Diagnosis.—In typical cases there is very

little difficulty in arriving at a diagnosis. All cases however are not typical, and occasionally we find the affection presenting an aspect reminding us of eczema or pityriasis; in these cases an absolute diagnosis is not of great importance, since these three affections are closely allied, and the treatment which would be suitable for one would answer for the other. In certain instances, however, it is a question between psoriasis and syphilis. In these cases the previous history of the patient must be elicited in the most thorough manner, as it will often enable a correct diagnosis to be arrived at when the mere appearance of the lesion would leave one in doubt.

Prognosis.—Psoriasis is never fatal, and rarely interferes with the general health. The chief inconveniences are its persistence, and its tendency to relapse, and thus afflict the patient for many years, and perhaps for life.

Treatment.—Psoriasis is an affection which will certainly try the patience of the sufferer and the skill of the physician more thoroughly than any other among the commoner diseases of the skin. The obstacles to satisfactory results are, in the first place, the difficulty of removing the eruption, and in the second place, the almost certainty of relapse.

The empirical remedies which have been found most useful are internally, arsenic, copaiva, carbolic acid, tar, mercury, and phosphorus; and externally, tar, mercurial ointments, green soap, and baths.

Given in small but gradually increasing doses for a considerable period, or in larger doses for a shorter time, *arsenic* will probably, in the majority of instances, if the patient can take it long enough, remove the eruption. It sometimes, though rarely, aggravates the trouble. If it be used at all, its employment should be thorough, and if a quick cure is desired, the object should be to introduce into the system the greatest possible amount of the drug in the shortest space of time consistent with due safeguards against the production of too much reactive irritation. It is of course difficult to determine in advance the appropriate dose for any given case; hence it is best to commence with small doses increased from day to day, until conjunctival or gastric irritation, etc., warn the physician that the limit of toleration has been reached. The dose must then be graduated so as to keep just within this limit until the removal of the lesions is effected.

The *balsam of copaiva* is another remedy of

value in the treatment of psoriasis. It is well adapted to hospital patients, but cannot be so generally employed in a private practice, in consequence of the odor which it imparts to the urine, and sometimes to the breath. It may be given in the same doses and manner in which it is used in gonorrhea, and with the usual precautions against the production of too much gastric, intestinal, or renal irritation.

Carbolic acid in commencing doses of 0.06 (gr. j) thrice daily, increased from day to day, will succeed in removing the eruption in many cases within a reasonable period of time, but is probably not as uniformly useful as copaiva or arsenic. It is most conveniently given in pill form, mixed with powdered licorice, soap, etc.

The effects of *tar* are very similar to those of carbolic acid.

Mercury in the hands of some has done good service in this affection. The majority of authors, however, believe it to be without value. Personally, we frequently use it, and to advantage in connection with other means.

Phosphorus in doses of one to two milligrams (1-32 to 1-64 gr.) sometimes removes the eruption with remarkable promptness.

The best preparation of phosphorus is probably Squibb's solution in cod-liver oil.

The foregoing are the principal *empirical* remedies which have proved serviceable in psoriasis. The rational treatment, however, based upon the supposed diathetic conditions underlying this affection, is substantially the same as that which has been discussed in connection with eczema (*q. v.*), and consists briefly in the employment of strict regimen, with an almost exclusively vegetable and fatty diet, and the use of diuretics, oxidants and hepatic stimulants, according to the special indications present. The rational and the empirical methods, however, may often be combined with benefit.

Whatever form of *internal* treatment may be adopted, disappearance of the eruption will be greatly facilitated by the judicious employment of *external* measures in connection with it.

The most effectual local applications are those which include strong alkalies, tar, emollients, and baths. They may be employed in the following manner: If the eruption consists of sparse patches, green soap, *spts. sap. kal.*, or the formula p. 57, should be thoroughly scrubbed into the parts with the

aid of a soft nail-brush, and the scrubbing continued until the thick scales are removed, and the parts begin to bleed a little. When this occurs, a fresh portion of the suds is smeared on and left to dry, and if the application has been made in the evening the patient goes to bed. The next morning an alkaline bath is taken, and after the bath, if the patient be in a hospital, the potash application is renewed. If, however, he is obliged to attend to his daily affairs, he must, after the bath and thorough drying, be rubbed with an emollient. For this purpose the *ol. pedis bubuli*, *ol. vitel. ovorum*, or, still better, vaseline may be employed. In the evening again the soap application is repeated, and this course is continued daily until the tendency to the formation of scales has greatly diminished, and the infiltration of the patches mostly subsided. When this has occurred, the potash may be discontinued, and some preparation of tar substituted. It is not well to commence the use of the tar until most of the infiltration is gone. The tar should be employed night and morning with strong friction, without, however, omitting the daily bath. In private practice, oxide of zinc or white precipitate may be substituted for tar

at the morning inunction, the tar to be employed at night.

The alkaline and tarry applications will be successful in direct proportion to the thoroughness with which they are made; but as it is not always convenient for the patient to employ them in the best manner, we must be content with less speedy results obtainable from their less efficient application. Under the best circumstances the cure of the eruption will always be a matter of weeks and often of months. A thousand and one other remedies have been recommended for the relief of this affection; but, so far as we are aware, none of them are superior to those which have been already mentioned.

CHAPTER XII.

PITYRIASIS.

THE term pityriasis has been used with great looseness, and with various significations; but will be here employed to designate an affection of rheumatic origin, whose chief characteristic is the presence of fine, dry, powdery scales seated upon a non-infiltrated surface,

very slightly if at all reddened. The scales are small, not imbricated like those of psoriasis, and less adherent, being readily removed by the slightest friction, and quickly replaced by the development of a fresh crop. This gives us a dry and continually desquamating surface. The patches of eruption vary in size, and may appear upon any part of the surface, though the affection is most frequent upon the scalp, face, and upper part of the body, and upon especially hairy parts, including the scrotum and genito-crural region. It is rarely found upon the lower extremities. Occurring on the scalp it constitutes one of the varieties of "dandruff," and is sometimes slightly modified in appearance by the mingling of sebum in the scales. It is also frequent in the eyebrows, and in men upon the upper lip, cheeks, and chin, if these parts are covered with hair, but in women and in men who shave it is rarely seen on these latter situations. It seldom or never becomes generalized.

Prognosis.—Pityriasis, when not located upon a hairy part, is usually a trivial and insignificant affection, and one which can, as a rule, be cured without much difficulty; but if it reaches the hairy portions of the face or the

scalp, it is more apt to become chronic, and by its persistence to result in a temporary or permanent alopecia. It is this fact which gives a special importance to the disease.

Treatment.—The treatment of pityriasis involves the employment of the general measures which have already been considered in connection with eczema and psoriasis, and need not be here repeated, and also certain local applications specially adapted to the lesion. Personally we have had the best success by a preliminary green-soaping for several days, followed by tar ointment for a week or two or longer, and this in turn succeeded by a mercurial ointment (white precipitate or nitrate), and finally, the prolonged use of some bland, oily application. A 5 % solution of the hydrate of chloral is often of service.

CHAPTER XIII.

LEPROSY.

LEPROSY, though a rare disease in the United States, is occasionally met with and therefore merits notice. By English writers it is usually called *Elephantiasis Græcorum*, and by continental authors, *Lepra*.

The disease presents three principal varieties, namely, the Tubercular, Macular, and Anæsthetic. The symptoms of these varieties usually commingle in varying proportions in different cases. Before the symptoms of leprosy become sufficiently distinct and characteristic to be recognized as such, we commonly find a prodromal stage of greater or less, often of years' duration. In this stage there is nothing to particularly attract attention to leprosy, and the only evidence of ill health may be a feeling of languor or loss of force, with sometimes mental depression. Occasionally a brownish discoloration (*macule*), or an isolated bulla, may appear from time to time, the first one usually healing before the second makes its appearance. Later the macules become more abundant and larger, from the size of a coin to that of a hand; but it is difficult to appreciate with the fingers any thickening or infiltration. The patches at first are of a reddish-brown, and as they increase peripherally their advancing border retains this color, while the center and other portions gradually lose it and fade into a dirty gray, and sometimes to dead white.

Sometimes these spots may disappear entirely without leaving any mark. When the spots first appear they are commonly *hyperæsthetic*, but

as the disease progresses this condition gradually disappears, and ultimately the white patch becomes completely *anæsthetic*. This is readily explained by the early congestion and subsequent destruction of the finer nerves. In company with the macules, or without them, tubercles may arise. These are thickened elevations of the skin, sometimes quite circumscribed, at other times more diffuse, but commonly without much discoloration. At first they may be hyperæsthetic, subsequently becoming anæsthetic. They appear, upon any part of the body, but very frequently make the face their favorite seat, showing themselves above the eyebrows, about the lips, and upon the ears. When they are developed to any great extent, they render the features repulsive and disgusting to the last degree. The tubercles frequently persist throughout the whole course of the disease, but sometimes undergo ulceration, or disappear by interstitial atrophy and absorption. Accompanying the tubercles there may be patches of skin which are anæsthetic, but which exhibit no other change. This anæsthesia may be temporary or permanent.

The *anæsthetic* form of leprosy may arise as a late stage in the course of a case which at the

beginning had exhibited tubercular features mainly, or it may occur without such previous tubercular development. The principal cutaneous lesions met with at the commencement of this form are *bullæ*. These vary in size, and persist for a short time only. Commonly they rupture, dry up, and leave a stain which after a time becomes anæsthetic. Hyperæsthetic patches of varying extent may appear from time to time, and persist for months or longer, and be ultimately succeeded by anæsthesia. The anæsthetic portions of skin may also undergo a certain degree of atrophy, which process may involve the subcutaneous tissues, and result in ulceration, and, if situated upon hands or feet, to caries of the bones.

Treatment. — The host of remedies that have been recommended for leprosy, and the fact that none of them can be relied upon, prove the rebelliousness of the affection, and the futility of most of the so-called specific methods of treatment to alleviate, much less cure this disease. A few cases have undoubtedly improved, and some have perhaps completely recovered. These are such rare exceptions, however, that it is hardly worth while, at the present time, and in this place, to enter into

any detailed consideration of them. About all we can reasonably expect to accomplish is to mitigate the severity of the affection in a measure, by removing the patient from leprous districts where the disease is endemic, and by combating individual symptoms as they rise. Gurgun oil, used internally and externally, appears to have relieved some cases ; but has not, we believe, effected any permanent cures.

In regions where the disease occurs endemically, segregation of lepers should be strictly enforced ; but when it occurs sporadically, this would not seem to be necessary.

CHAPTER XIV.

ICHTHYOSIS.

THIS is one of the rarer affections of the skin, and of much less importance than the disease last described. To the naked eye its prominent characteristic appears to be an excessive development of epidermis ; and in the anatomical classifications it is placed by the side of psoriasis and pityriasis in the class of squamous diseases. As a rule, ichthyosis is

developed in early life, even a few months after birth, though exceptionally it may appear for the first time after adolescence. Once fairly established, it is rarely cured, but persists indefinitely, and usually during the whole life of the patient. It is markedly hereditary, and frequently affects several members of a family.

Ichthyosis manifests itself in the beginning by great dryness of the skin with excessive production of horny cells ; but, as a rule, there is at first little change in the color of the skin ; that is to say, the skin is not reddened. The natural lines of the skin are deepened and become more manifest, mapping out the surface into little areas, plainly visible to the naked eye, which, under ordinary circumstances, could only be perceived with the aid of a lens. The dry and scaly condition of the skin would at first suggest the idea of pityriasis ; but a more careful examination shows that the constant fine, bran-like desquamation, so prominent a feature in pityriasis, is absent in ichthyosis.

Later, as ichthyosis advances, the masses of epidermis become much thicker, and separated into little hillocks, as it were, by numerous lines and fissures. The fissures extend

through the epithelial accumulation, but do not generally invade the rete or the derma, and hence are not accompanied with the oozing found in some other affections. The color of the surface changes also, becoming tawny, dark, and at last almost black. This is due not so much to pigmentary discoloration of the skin proper, as to accumulation of dust and dirt among the epidermic scales. Finally, in a fully-developed case, we have a more or less generalized epidermic hypertrophy of dark aspect, and everywhere seamed by cracks and fissures, interfering sorely with the comfort of the patient. A remarkable peculiarity of this disease is the diminution or absence of perspiration. In many cases this function is merely diminished, in others it appears to be totally absent. This is undoubtedly due either to congenital absence or defective formation of the sudoriparous glands, or to their early atrophy.

Prognosis.—As a rule, the local difficulty is never wholly remedied. A cure may generally be considered out of the question, and the affection expected to annoy the patient to a greater or less degree during his entire life. A certain amount of relief, however, may be afforded by treatment.

Treatment.—The first therapeutical indication is to remove the scales. This may be done by daily, or twice daily frictions with green soap, aided by alkaline, hot air, or vapor baths. After the frictions with soap and the baths, the skin should be thoroughly rubbed with some emollient. A very excellent formula for this purpose may be prepared as follows :

R̄	Potassii iodidi.....	4.	(3j)
	Ol. pedis bubuli.....		
	Adipis	āā 75.	(ʒijss)
	Glycerini	30.	(fʒj)

M

Instead of this we may use cod-liver oil, *ol. vitel. ov.*, or vaseline. After we have succeeded in removing the scales and getting the skin in a tolerably fair condition, if we stop treatment, the morbid condition will soon return as bad as ever. It will therefore be necessary to continue treatment indefinitely, by the more or less frequent use of alkaline and Turkish baths with daily inunctions. Jaborandi, by stimulating the sudatory function, produces decided amelioration. By these means, and by these alone, the condition of the patient may be rendered quite comfortable, so long as they are

persisted in. Other remedies, with the possible exception of cod-liver oil, appear to be of no service in this disease.

CHAPTER XV.

ACNE.

UNDER the term acne we include the affections of the sebaceous glands.

Most writers describe acne as a purely local affection, but we have placed it in the group of reflex affections in consequence of a firm belief that in the great majority of instances it is not a primary condition, but one dependent upon irritation, derangement, or disease of other organs, reflected upon the skin, the special organs involved being those connected with the sexual and digestive systems. Clinically, we will find upon careful examination that, in the majority of cases of acne there is some pre-existing irritation, or unusual condition of some of these organs. This derangement may be merely functional, or it may be organic. The milder varieties of acne usually occur shortly after the establishment of puberty. In the male the affection may entirely depend upon the

physiological changes which take place at this period, and may be prolonged for several years, or it may be produced or aggravated by masturbation. In the female the same causes may induce the evolution of acne, or it may be excited or intensified by some irregularity in the establishment of the menstrual flow.

The milder forms of acne are usually found in young persons, and date their origin from about the time of the establishment of puberty. The severer forms are more frequently found in individuals from twenty-five to fifty years of age or even later, and in males are usually induced by gastric or hepatic derangement, which derangement may be one of the many forms of dyspepsia, or may be due to the excessive use of alcoholic liquors. We are not aware that any derangement of the male sexual apparatus gives rise to acne late in life. In the female, the causes we have mentioned may induce the severer forms of this disease, and in addition they may be caused by chronic, inflammatory, or organic disease or displacements of the uterus, or abnormal conditions of the ovaries.

The principal varieties of acne are :

Acne sebacea,

“ punctata,

“ miliaris,

Acne simplex,

“ indurata.

Acne sebacea is a functional affection of the glands, and consists in an excessive formation of thin oily sebum, which flows in great abundance from the orifices of the sebaceous glands. The glands usually affected are those of the forehead, cheeks, and nose, or it may be confined to the glands of the latter alone. It gives to the skin a greasy, unctuous, and shiny aspect, and affords a convenient harbor for particles of dust and dirt that may be floating in the atmosphere. This variety of acne is not so frequent as the others, but is the source of annoyance to the patient, and sometimes is sufficiently marked to induce him to consult a physician concerning it. It frequently lasts for several years if unchecked, but rarely amounts to anything more than an inconvenience. If the hand be passed over the affected parts, it will take up a considerable portion of the sebum, and if a piece of paper or linen be applied, it is readily stained. Sometimes when the secretion is abundant, it loses its watery parts by evaporation and dries upon the surface into thin scales, which must not, however, be mistaken for those of pityriasis. *Acne sebacea*

usually occurs in young persons from fifteen to twenty years of age, rarely later than the twenty-fifth year. It is specially marked about the time when puberic changes are most active. The chief annoyance connected with it is the shiny appearance of the skin, and the readiness with which dust and dirt adhere.

Treatment consists in careful attention to the general health, the elimination of any discoverable causes if possible, alkaline washes to dissolve the grease, and the application of astringents and absorbents. Of these a weak solution of tannin, or a powder composed of

Tannin.....4. (3j)

Rice powder (Lubin's)...30. (3j)

affords good results, or the *tinct. ferri chloridi*, pure or diluted with alcohol, may be used.

ACNE PUNCTATA.

This is the name given to the form of acne in which the face is studded with little black points looking like grains of gunpowder. These points indicate the openings of the sebaceous follicles, and the black speck itself is caused by the dirt which has been entangled in the external extremity of the plug of sebum which fills the follicle. If the skin in the neighborhood of these points or *punctæ* be

firmly compressed, the sebum will be forced out of the follicle in the form of a little worm-like body with a black head, called a comedon. Instead of the sebum being fluid and oily as in the last variety, and running freely from the follicle, it possesses much greater consistence and is retained in the follicle, which it either gradually distends or irritates up to the point of inflammation, producing acne simplex.

Treatment consists in attention to the general health, breaking up any bad habits if they exist, and locally removing the impacted sebum by pressure upon the surrounding skin. This may be effected by squeezing the skin around the follicle between the nails, or more readily with the aid of a watch-key, or still better with a little instrument which we have devised for the purpose, and which is here shown—(Fig. 5.)



FIG. 5.—COMEDON EXTRACTOR.

This extrusion of the sebum-plugs should be accomplished as thoroughly as possible, and the face daily washed with soap and water. We are not acquainted with any internal or exter-

nal remedy which can be relied upon to check the tendency to the formation of comedons ; our chief care should be to keep the face in a presentable condition until the affection of its own accord deserts the patient, which it will usually do in four or five years from its first appearance.

ACNE MILIARIS.

This form of acne, sometimes called simply milium, is, like the last affection, characterized by the retention of sebum. Instead, however, of a black point upon the level of the skin, we have a minute white or pearly papule or tumor, elevated a little above the surface. These frequently occur in great numbers, and their favorite seat is the neighborhood of the eyes. In some way the orifice of the follicle becomes obliterated, and is frequently indistinguishable, and the sebum gradually collecting, distends the gland, and raises and renders tense the epidermis above it.

The *treatment* of these little affairs is very simple, and consists in slitting them with a lancet-point and squeezing out their contents. A drop of the tincture of iodine applied to the follicle will often excite sufficient inflammation to obliterate the gland, and prevent the

formation of a fresh accumulation at the same place. We know of nothing which has any preventive control over the affection.

ACNE SIMPLEX.

This variety consists in a slight inflammation of the sebaceous follicles, sometimes accompanied with the formation of pus. It is recognized by the occurrence of red, elevated papules, in many of which the inflammation may have gone on to suppuration, evidenced by the appearance of a whitish head or point upon the papule, or the whole papule may change into a pustule. The pus in time discharges and the papule disappears, leaving the follicle comparatively uninjured, and liable to again inflame in the same manner. These papulo-pustules may be few and scattered, or exceedingly numerous. The integument between them may, but usually does not, partake of the same inflammatory action. The favorite seats of this variety are the forehead, temples, cheeks, chin, shoulders, and chest. It is rarely found in other parts. Scattered among the papules and pustules will usually be found some of the black points of acne punctata.

Treatment.—The first indication is to as-

certain and remove, if possible, the cause, searching well into the digestive and sexual systems for any source of irritation which may be present, and adapting hygienic and other remedies accordingly. *Externally* we should endeavor first to relieve the inflammation and congestion by appropriate measures. This may be accomplished by passing the point of a lancet into all the pustules, and evacuating their contents by a little pressure. The contents will usually be found to consist of pus with a little whitish mass of sebum of somewhat firm consistency. Even the papules should in like manner be pricked. After this, fomentations of hot water for fifteen or twenty minutes several times a day will greatly hasten resolution. The labitual use of soap when washing the face should also be recommended. If these measures do not suffice, and they very frequently will not, it will be necessary to have recourse to something else. Among the milder applications the following will be found very useful :

R̄ Sulph. precip.

Alcohol.

Spirit. lavendul. co.

Glycerini.

Aq. camphor.....āā 30. (3j)

This lotion should be applied as frequently as may be convenient, and its use persisted in for several weeks. At the same time all comedons should be extracted, as the accumulation of sebum in the follicles is undoubtedly one of the exciting causes of their inflammation. At best, however, the treatment of acne simplex is far from being satisfactory.

ACNE INDURATA.

This form is really an exaggeration of the preceding, but commonly comes later in life. The papules are much larger, and many of them in fact may with propriety be called tubercles. In two or three days points of pus may be visible upon their summits. This collection of pus enlarges, and may involve the whole papule before breaking, or, on the other hand, the suppuration may commence at the center of the tubercle, and give evidence of its presence by a sense of obscure fluctuation several days before it is perceived by the eye. After the pus has found an exit it usually leaves after it a small indurated nodule, which gradually subsides in from one to three weeks. When the tubercles are large, and the suppuration extensive, the destruction of the tissues sometimes results in

the formation of a small scar. These tubercles of acne indurata are usually accompanied with smaller papules of acne simplex, and in most cases we will find every gradation in size from the smallest to the largest. The papules and tubercles may be few in number, or exceedingly abundant, and the skin between them may be healthy, or, on the other hand, congested, inflamed, and thickened. As a rule the larger and more numerous the tubercles, the more the intervening skin is involved. The principal, in fact, exclusive seats of this affection are the same as those of A. simplex. It has no definite course, but frequently, when unchecked, persists for years.

Treatment.—In the first place we should seek for the predisposing causes of the affection, and when discovered, remove them, if possible, for upon this depends all hopes of a permanent cure. External applications, however, are of great service. In the first place, freely incise all papules and pustules, then relieve the acuteness of the inflammation by the use of hot fomentations for a few days, and then make several nightly vigorous applications of green soap. The soap, if freely applied, excites a certain amount of irritation and some inflammation, and after a few days'

use the face will look worse than it did before. When sufficient reaction has been induced the soap is omitted, and the sulphur lotion just mentioned is substituted for it. The artificial inflammation will subside in a few days and carry with it much of the pre-existing induration, and give the skin a much smoother appearance. The course of green soap is then to be repeated several times until the face finally becomes smooth. A good deal of redness remains for a time after the discontinuance of the soap, together with a certain tendency to desquamation. This gradually subsides, but its disappearance may be hastened by the use of the sulphur lotion. Strange as it may appear, the worst cases of acne are generally the ones which respond best to treatment, and it is the milder cases of *A. simplex* and *punctata* whose treatment is the least satisfactory.

CHAPTER XVI.

ROSACEA.

THIS affection in its early stages consists simply in a reddened or erythematous condition of the integument of the tip or alæ of the

nose, sometimes accompanied with a similar condition of the cheeks ; or it may exist upon the cheeks alone. The redness may not be uniformly distributed over the affected parts, but consists of small reddened spots (*guttæ*), with intervening skin of normal color. Gradually the area of redness increases by enlargement of the size of the "drops," and increase in the area affected, until finally the greater part of the nose is the seat of a diffuse erythema, not of a bright inflammatory red, but rather of a livid or venous hue, especially noticeable when the part has been exposed to the cold. This process does not take place with rapidity, but, on the contrary, in the great majority of cases, with very great slowness, requiring months, and not unfrequently years for its development. In this condition it may persist indefinitely, but more frequently passes on to the next stage, which is characterized by the appearance of minute blood-vessels upon the surface. As the affection progresses they increase in size, both in length and breadth, and frequently become tortuous and varicose. At the same time the integument itself thickens, and occasionally pustules arise. These are generally seated in the glands, and are in reality an acne, secondary to the rosacea. They

are rarely, however, a prominent feature of the affection, and should be regarded as accidental complications, due to the extension of the morbid action from the surrounding tissues to the glands. This second, or varicose stage of rosacea is, like the first, of slow development, often requiring years, but still progressing with slow but steady step. In this condition the affection may remain indefinitely, and, in fact, may never go beyond it. In some cases, however, more frequently in men than in women, the morbid action may continue, and result in very great thickening of the integument, until it eventuates in excessive hypertrophy and deformation of the nose. This thickening and hypertrophy may be uniform, or, more frequently, somewhat irregular, budding out in different places into rounded elevations or tubercles. These are not proper acne tubercles, but projections of the general integumentary tissue, including, of course, many glands, which, however, may not be sensibly altered, though they sometimes appear to be increased in size, with orifices larger and more patent than usual. Enlarged and tortuous veins, which characterize the second stage, are still present in this ; but the red color, so prominent in the first stage and

also in the second, in many cases disappears in great measure as the hypertrophic changes advance.

Rosacea sometimes occurs in youth, that is, from the eighteenth to the twenty-fifth year; but, as a rule, does not appear until much later, and rarely, if ever, becomes at all prominent until middle or more advanced life.

Etiology.—The causes of rosacea are both external and internal, the latter, however, being the most frequent and prominent. Anything which tends to increase the circulation in the face is influential in the production of the malady. Thus, repeated exposures to cold, etc., establish a reactive congestion which may not subside before a fresh exposure aggravates the trouble; but it is probable that in these cases the cold is only the exciting cause, and would be unable to provoke the affection in the absence of predisposing tendencies. Among the internal causes which influence the facial circulation, gastric and uterine derangements, and the too free use of spirits, are certainly the most powerful. The trouble, however, is not, in men, to be exclusively attributed to the use of fermented or distilled liquors, as we fre-

quently meet with cases among strict abstainers, nor is it to the direct influence of the alcohol upon the skin, but rather to a reflection from the digestive apparatus, which has been disordered by habitual use of spirits, that the trouble must be referred.

In females digestive derangements likewise play an important part in the production of rosacea, but unquestionably uterine or ovarian disturbances are more frequently the source of the trouble. The fact, however, that the uterine difficulty coexists with the cutaneous, does not necessarily imply that it stands in a direct causative relation to it, as both may depend on some anterior, and perhaps more obscure morbid condition.

Treatment.—The treatment of rosacea is both general and local. The general treatment involves, in the first place, the removal if possible of any discoverable cause which may be found existing, and the avoidance of all influences which tend to excite or keep up the trouble ; attention to diet, habits, and general hygiene being of the first importance. The *local* treatment varies with the stage of eruption and condition of the parts, and in the first stage consists in the use of green soap, or alkaline soap-spirit, followed by a sulphur

lotion, as already described in connection with the treatment of acne.

In the second stage, when the veins have become enlarged and varicose, they should be destroyed by lancet-punctures, or the introduction of needles coated with nitrate of silver, together with the soap frictions, etc. In the third stage, when the hypertrophy of the skin is excessive, we may obtain very decided shrinkage by the use of the constant galvanic current, the two rheophores being placed upon opposite sides of the nose, and a strong current allowed to pass for ten minutes every two or three days.

As a last resort we may excise a portion of the redundant integument, or introduce white-hot needles into the hypertrophied tissue.

CHAPTER XVII.

URTICARIA.

URTICARIA is an affection usually characterized by the sudden development upon the skin of white or red elevations called *wheals* accompanied with pruritus.

In some cases sensations of heat and itching precede the appearance of any lesion

upon the skin, but the rubbing and scratching to which they give rise speedily induce it. The number of the wheals varies. In some cases but three or four are present at a time, while in others they may be very abundant. The eruption having appeared, its duration is not constant. Sometimes the elevations last a few minutes only, or they may persist for several hours, at the end of which time they disappear as rapidly as they came. Later in the day, or upon the next day, a renewal of the eruption occurs, and these renewals may occur a few times only, or may be a daily phenomenon for months. In this latter case the term *chronic* is applied.

The eruption, when simple or uncomplicated, disappears without leaving any scar or mark, except such as is produced by scratching.

Sometimes the eruption of wheals is preceded for a day or two by considerable œdema of the skin, especially about the face, hands, wrists, feet, and ankles, accompanied with pruritis. The nature of this œdema may not at first be recognized, but it usually subsides in a day or two and is replaced by the characteristic elevations. This form is termed *œdematous urticaria*.

In some cases, the eruption is complicated by the effusion of blood into the wheals, giving rise to an urticaria *purpurea* or *hemorrhagica*, sometimes incorrectly called *purpura urticans*. Upon the subsidence of the wheals the purple stains remain until the effused blood is absorbed. Constitutional symptoms, characterized by high febrile action, sometimes accompany attacks of acute urticaria.

Etiology.—The causes which lead to the development of urticaria are frequently obscure, but, in the majority of cases, gastric or uterine irritation is present. Upon this point most writers agree. Acute urticaria, in those predisposed to it, is apt to follow the ingestion of certain articles of diet. Different cases present special peculiarities in this respect, but crabs, lobsters, and mollusks have most frequently been found to be the offending agents. In chronic cases the difficulty of ascertaining the cause of the eruption is often very great. In many patients the uterine, ovarian, and digestive apparatus are in perfect order, and careful supervision of the diet fails to reveal the exciting cause.

Treatment.—The treatment of acute urticaria *ab ingestis* is very simple, and consists in removing from the body, by emetic or purge,

the offending substances. In chronic urticaria, however, the treatment is by no means so satisfactory. If the causes can be discovered and removed, this must, of course, be done as soon as possible, and their removal will usually be followed by the disappearance of the malady; but if we cannot ascertain them, we will be forced to a tentative exhibition of neurotics, anti-pruritics, tonics, and the like. Arsenic and phosphorus sometimes prove of service. The so-called solution of Chloro-phosphide of arsenic prepared by Caswell, Hazard & Co., New York, in ten-drop doses, or Squibb's sol. of phosphorus in cod-liver oil in two-drop doses may be prescribed. The Turkish bath, however, has proved efficacious where everything else has failed.

CHAPTER XVIII.

ZOSTER.

ZOSTER, also called herpes zoster, is an affection characterized by the appearance of groups of large vesicles, usually situated upon one side of the chest along the course of one of the intercostal nerves. The fact of its frequent appearance in this situation has given it

the name it bears. The affection, however, may develop elsewhere, and appear in connection with the principal nerve-trunks of the limbs, face, and scalp.

The eruption may consist of a single group or patch of vesicles, or there may be several patches with healthy skin intervening arranged along the course of the affected nerve. Each patch consists of from two to twenty vesicles situated upon a reddened, raised, and inflamed base ; but sometimes the skin is only raised and red, and without vesicles. The eruption is almost invariably unilateral, cases of double zoster being exceedingly rare. As a rule the affection, like the eruptive fevers, occurs but once during the lifetime of the patient.

The vesicles themselves are usually filled with a clear serous, but sometimes turbid fluid, and (if the vesicles are not broken mechanically), persist for a week or ten days, at the end of which time absorption of their contents occurs, and is completed in a few days more, and nothing remains but flat scales which in time drop off, leaving small red or purplish spots which, in turn, disappear. Usually the eruption is quite superficial, and involves little more than the stratum corneum and rete ; but occasionally the lesion is deeper

and invades the corium. In these cases the vesicles may give rise to ulcers, and be followed by cicatrices. In the place of clear serum the vesicles may contain pus or blood, and in aged, feeble, and cachectic individuals, rupture easily, and result in extensive and even phagedenic ulcerations.

Symptoms.—Zoster may be ushered in by febrile symptoms, usually mild, sometimes severe, or it may appear upon the decline of some other affection. The most characteristic subjective phenomenon, however, is neuralgia of the nerve along whose course the eruption is developed. The pain may precede the eruption, accompany it, and persist for a variable period after its decline. It is usually mild, but in some cases is very severe. Occasionally it is entirely absent. As a rule the neuralgia disappears shortly after the desiccation of the vesicles, but in some cases lasts for many months, or it may be replaced by a distressing pruritus localized in the parts which have been affected by the eruption.

Prognosis.—The *prognosis* is almost invariably favorable, except in very aged persons, in whom serious ulceration has sometimes led to a fatal result. The intractable neuralgia, in some cases, is a disagreeable, though not dangerous sequela.

Treatment.—The principal indications for treatment in zoster are, to protect the vesicles from rupture, and second, to relieve the neuralgia. The first may be accomplished by smearing the seat of the eruption with oil, and then covering it with a thick layer of some inert powder, a very good formula for this purpose being the following :

R̄ Zinci oxidi.

Pulv. amyli.

Pulv. lycopodii.....āā 15. (℥ss)

M

to which ten grains of opium or two of morphia may be added. Instead of using the powder, we may cover the vesicles with several coats of collodion containing a little morphia. Under the protection of these coverings the vesicles go through their normal stages more quickly and pleasantly than if permitted to rupture, as the exposed corium is tender and painful upon the slightest friction of the clothing.

The *neuralgia* of zoster is to be treated upon general principles, and exactly the same as if unaccompanied by eruption. If it is specially obstinate, counter-irritation along the spine, near the roots of the affected nerves, will some-

times prove of service, the application of the actual cautery (white-hot) being specially useful in this connection.

CHAPTER XIX.

HERPES.

UNDER the general name of *herpes* we here include *herpes labialis*, *preputialis*, *vulvaris*, etc., affections characterized by the appearance of vesicles upon a reddened and slightly inflamed base, and situated upon the parts indicated by their titles. The vesicles are of medium size, being larger than those of eczema, but smaller than the vesicles of zoster. The eruption upon the lips may occur upon either the upper or the lower, and upon the integumentary surface, or near the red border, often near the angles of the mouth. The eruption is frequently bilateral, and may affect the same patient any number of times. The vesicles usually rupture upon the second or third day, and if their contents, usually clear serum, is not wiped away, it dries into a thin translucent scale or scab. This scale remains attached for a day or two longer, then drops off,

leaving a slightly reddish mark which soon disappears.

The same condition of things is often met with upon the male and female genitals, but when it invades the mucous membranes the duration of the vesicles is still more ephemeral.

The epithelium very quickly ruptures, and if there be any lack of cleanliness, small, superficial ulcerations result. These, if neglected, may become larger and confluent, and be mistaken for venereal ulcers.

In some patients herpes of the genitals is apt to relapse, and by frequent attacks annoy the patient for years.

By many authorities these forms of herpes are improperly classed with zoster as varieties of the same disease. The principal distinctions between them are the following :

Zoster.

Is unilateral (with very rare exceptions).

Occurs but once (with rare exceptions).

Neuralgic pain in the course of the affected nerve.

Vesicles large.

Herpes.

Is frequently bilateral.

May attack frequently.

Pain not neuralgic, but of a burning or itching character.

Vesicles small.

Fluid often opaque.	Fluid usually transparent.
Vesicles often persist until the fluid is absorbed.	Vesicles usually rupture in a day or two.
Duration from two to four weeks.	Duration from four to ten days.
Lesion often extends to the corium.	Lesion superficial.
Often leaves cicatrices.	Never leaves cicatrices.

Prognosis.—Always good. It is a trivial affection, except when it assumes the relapsing form about the genitals, in which case it may be a source of great annoyance to the patient.

Treatment.—The treatment of all the different varieties is exceedingly simple. The herpes about the mouth rarely requires any treatment whatever ; at most the application of a little absorbent powder. The eruption about the genitals, however, should be well dusted with powder, and, if it affects surfaces which are in contact, they should be separated by pieces of linen. If ulceration has occurred through lack of cleanliness, or from any other cause, the addition of a mild astringent, such

as a weak solution of sulphate of zinc or copper, or nitrate of silver will prove of service. The tendency to relapse, however, must be broken up if possible. This is often difficult of accomplishment. I have, however, been able to control it in some instances by the exhibition of quinia in full doses.

CHAPTER XX.

XANTHOMA.

THIS affection consists in the appearance of yellowish spots whose favorite seat is the eyelids. They usually first show themselves upon the left upper lid near the inner canthus. The primary spot, at first small, gradually increases in size, and others make their appearance in the neighborhood, or upon the other side, exhibiting a certain tendency to symmetry. Later they develop upon the lower lid, and beneath it upon the cheeks and nose. They may also arise upon other parts of the body.

The yellow patches present two distinct forms : first, the *macular*, in which the yellow patch does not project above the surrounding

surface, and may even be depressed beneath it; and second, the *tubercular*, in which there is a slight prominence of the patch. These two forms appear to be in reality varieties of the same affection, insomuch as they frequently coexist, and the macular form may become tuberculated at its borders.

Xanthoma causes very little inconvenience to the patient, other than the unsightly appearance which it produces, and occasional interference, when large, with the motions of the eyelids. The affection once developed lasts for life unless remedied by operative procedures. It is very much more frequent in women than in men.

Etiology.—There are strong reasons for believing that xanthoma may be connected with functional or organic disease of the liver, though the exact relations between the two are unknown.

Treatment.—The object of treatment is simply to remove the deformity. The best way of effecting this is by excision, provided the lesion is so situated and of such size that its removal will not result in ectropium. Applications with a view to procuring absorption, etc., are futile, and caustics are less desirable than the knife.

CHAPTER XXI.

CHLOASMA.

CHLOASMA is a designation which has been applied somewhat loosely to all brownish or yellowish-brown discolorations of the skin, larger than freckles, by whatever cause produced.

Chloasmata may be divided into *idiopathic* and *symptomatic*. The idiopathic include those pigment deposits which are the result of external causes, as, for instance, the pigmentations which occur in pruriginous affections as the result of scratching, or the stains which sometimes follow the application of a blister or a sinapism, or, lastly, the discoloration of the surface commonly known as tanning, and due to exposure to the weather.

Symptomatic chloasmata, however, are entirely different, and are due to an internal cause. The most important of these is the so-called chloasma *uterinum*.

This affection appears as a brownish discoloration of the forehead, temples, or cheeks, as a concomitant of pregnancy or uterine disorder. It may be limited in extent, and not very

pronounced in color, or, on the other hand, may exhibit itself extensively and with a very dark hue. It may appear upon any one of the locations mentioned, or upon all of them. These stains are presumed to be of uterine origin, insomuch as they never appear before puberty, rarely occur except during pregnancy, or during the existence of some uterine or ovarian disease, and diminish or disappear with the removal of these conditions, and also after the permanent cessation of the menses.

This form of cutaneous discoloration is of course confined to females, and it is exceedingly rare to find anything similar in the male except in certain neurotic disorders.

Treatment.—In the idiopathic forms, if they do not subside upon removal of the cause which excited them, there is little use in trying to get rid of them by local applications, as the pigmentary deposit upon which they depend seems to be located in the cells of the rete, and pigment once deposited can, as a rule, be removed by mechanical means only and not by absorption.

In chloasma uterinum, however, it is probable that the pigment deposit is more superficial and located among the cells of the stratum corneum. We may therefore hope, by remov-

ing the horny layer, to remove with it the pigmentary deposit, or at least a portion, and by the termination of pregnancy, or relief of the uterine disorder, to prevent its reformation.

There are a number of agents capable of destroying the superficial layers of the epidermis, and causing their exfoliation, as cantharides, mustard, iodine, and corrosive sublimate, and any one of them might be used for the purpose, were it not that some of them are very apt to produce an idiopathic chloasma, which may last longer, and prove more disfiguring than the original affection. Of the epidermides mentioned, corrosive sublimate is to be preferred as the least likely to produce these results. It should be used as a lotion, from five to ten grains to the ounce, applied two or three times a day, until the stratum corneum loosens. This may then be rubbed off with a damp towel, and is replaced by one less pigmented than before, or perhaps altogether normal. If necessary, the applications may be repeated, and the new horny layer removed by the same means.

CHAPTER XXII.

SCABIES.

SCABIES, or the itch *par excellence*, is an affection characterized by the development of little transparent, globular, non-umbilicated vesicles upon the skin, their favorite seat being the hands, especially between the fingers. The development of these vesicles is accompanied with severe itching, and the parts affected are usually well scratched. This scratching of the diseased parts, and the subsequent scratching or handling of other portions of the integument, lead to the extension of the disease to them, and we find that, as a rule, the affection next invades the penis in the male, the breasts in the female, and the feet in children, from which again it may extend to all other parts of the body, the anterior in preference to the posterior. The head and face, however, are rarely if ever affected.

In some cases after a few days, in other cases later, certain secondary eruptions arise. These, as a rule, are papular and pustulas forms of eczema in those predisposed to thir affection, scratch-marks, and rather large, iso-

lated, frequently umbilicated pustules. In some cases furuncles and abscesses may form. In other words, the eruption in an advanced case is usually polymorphous. We may also find what is called the *cuniculus* or acarian burrow. This is a fine line, usually curved, rarely straight, of a grayish, sometimes whitish color, and sometimes mottled with black points. This line is generally from a quarter to half an inch in length, and can be detected only by close inspection, but more easily with the aid of a lens. It is usually found near the vesicles, sometimes upon their surface, but it may be at a distance from them.

Scabies is exceedingly contagious, and readily transmitted by too close intimacy with a person already affected, or by sleeping in an infected bed, or wearing infected clothes. Ordinary handling, as in the examination of a patient, is not likely to give rise to it.

The pruritus in this affection may be mild, but is usually severe, and is generally worse at night when the patient is warm in bed.

Etiology.—Scabies depends upon the presence of the *acarus scabiei*. Though barely visible to the naked eye, the acarus may be readily recognized under the microscope as a minute insect, from one-fortieth to one-fiftieth

of an inch in length. The body is ovoid and the head quite small. The female is larger than the male, and is provided with eight legs. The anterior four are provided with suckers and numerous hairs; the posterior four have no suckers, but to each is attached a specially long hair, with several shorter ones. Upon the belly are short, triangular spines with their apices directed backward.

The male likewise has eight legs; the anterior four and the posterior pair have suckers, while the other pair have long hairs as in the female; the triangular spines are absent. The young acarus has but six legs, four in front and two behind.

An impregnated female acarus having effected a lodgment upon the skin immediately penetrates the epidermis and burrows along beneath it, each day laying an egg or two, until a dozen or more have been deposited. Owing to the spines on her belly she cannot back out of the burrow, but is compelled to advance, which she continues to do, usually in a curved direction, forming the cuniculus. After a time she dies, but the eggs behind her hatch, and the young work their way to the surface. When the latter mature the females become impregnated, re-

peat the procedures of their mother, and in this way prolong the disease indefinitely. The male never burrows.

Treatment.—The treatment of scabies is exceedingly simple, and when properly carried out is always successful. The indications are, first, to destroy the insect, and second, to relieve the concomitant eruptions if they be sufficiently severe to require special treatment. Sulphur is the orthodox remedy for scabies, though many others have been recommended and are perhaps equally effectual. It should be used in the following manner: Put the patient into a warm bath, and let him soak for twenty minutes or half an hour; then let him be rubbed all over, except the face and head, with common soft soap and water, a scrubbing-brush being used if practicable. This will break open the furrows, and expose the acari. Afterward rinse with clean water and dry the surface. Then rub in with strong friction a sufficiency of the following:

Rʒ	Potassii iodidi.....	4.	(3j)
	Ungt. sulphuris.....	30.	(3j)

M

The patient goes to bed, and sleeps all night

with the ointment upon him. In the morning he washes himself clean and puts on clean under-clothes. The clothing that he has worn before, and the bed linen, should be disinfected by baking or thorough boiling. One such application is usually sufficient to destroy the insects and cure the disease ; but if not, it may be repeated. Usually the secondary eruptions will subside spontaneously upon the removal of the cause which induced them ; but if not, they must be treated upon general principles.

If there be a great deal of irritation of the skin, or diffuse inflammation, as sometimes occurs, it is well to take measures for allaying it a few days in advance of the specific treatment, and to employ this latter in a somewhat milder way. The following

R̄	Ol. cadini.....	
	Sulph. precip... ..	āā 12. (3iij)
	Glycerini amyli.....	24. (3vj)
	Adipis benzoati.....	93. (3iij)

M

is less irritating than the ordinary sulphur ointment.

CHAPTER XXIII.

PHTHIRIASIS.

By phthiriasis we understand the affections produced by the insects known as the *pediculus capitis*, the *p. corporis*, and the *p. pubis*, commonly called the head-louse, the body-louse, and the crab-louse. The nature and appearance of these insects are so well known that a description of them is unnecessary. They produce affections known respectively as *phthiriasis capitis*, *p. corporis*, and *p. pubis*.

PHTHIRIASIS CAPITIS.

This affection, common enough in childhood, is rare among male adults, but is sometimes met with in women of the lower classes. The insects having gained a footing, cause considerable itching which naturally leads to scratching. This may be so vigorous as to lead to excoriation, with oozing of bloody serum, and is frequently the exciting cause of an eczema of the part in those predisposed to this affection. Usually the *ova* of the insect will be found in abundance, attached to the hairs, the insects themselves crawling about in all directions. If much eczema be present the exudation

and crusts will mat the hair together, forming a disgusting mass of vitalized filth.

Treatment.—The most effectual treatment is to shave off the hair, and unless there is some insuperable objection, this should in young children be done, especially when the trouble is accompanied with much eczema. If shaving is impracticable, the tincture of staphisagria, infusion of tobacco, or kerosene oil applied night and morning for two or three days, usually effects the destruction of the parasite.

PHTHIRIASIS CORPORIS.

This is a much more important affection than the last. The *pediculus corporis* makes its nest or habitation among the under-clothes of the patient, and not beneath the skin, like the acari, nor upon the skin and among the hair, as do the other species of pediculi. It seeks by preference points where the clothes are thrown in folds and there lays its eggs.

The wandering of these insects over the surface and their continual bitings excite a certain amount of irritation and induce the patient to scratch. This he is apt to do quite freely, and if there be any prominent and swollen papillæ, or small papules upon the surface (and

sometimes little papules form around the bites) they are very liable to be excoriated, and a minute droplet of blood exudes and dries into a small black crust. These minute incrustations are rarely absent, and are to a certain extent pathognomonic of the affection. As the insects increase in number, the irritation likewise increases, and the pruritus becomes intense, keeping the patient busy with his nails the greater part of the time. A superficial scratching, however, will not commonly afford sufficient relief, and the unhappy sufferer tears the skin with his nails, until he is a mass of bleeding excoriations. Under the influence of the continual irritation the skin darkens, and the body is found covered with lines and blotches more or less deeply pigmented. When the disease is severe upon the lower extremities, it is not unusual to find enlargement and tenderness of the inguinal glands.

This affection is by far the most frequent cause of severe pruritus, and if a patient with this symptom presents himself, the first suspicion should be that he is suffering from phthiriasis, unless some other very evident cause should be present, and it must be remembered that *pediculi* do not confine themselves to the poor and miserable, but some-

times are encountered among the better classes, and may exist for a long time before their presence is suspected. In all cases then of severe pruritus, search for the *pediculus*, and look for it, not upon the patient's body, but among his clothes.

Treatment.—The indications are clear. Give the patient a warm bath with plenty of soap, and after drying let him be sponged over several times with *tinct. staphisagriæ*, and his clothes and bed-linen disinfected by boiling, baking, or sulphur fumigations.

PHTHIRIASIS PUBIS.

This affection is due to the *pediculus pubis*, an insect whose preference seems to be for the hairy parts of this region. It is not, however, confined to this locality, but may take up its abode among the hairs of the limbs, chest, axillæ, whiskers, and eyebrows, in fact, wherever there is hair, except the head. The insect derives its nourishment from the skin, to which it is usually found strongly adhering. It lays its eggs among the hairs, to which it attaches them in the same manner as the *p. capitis*.

The *p. pubis* does not usually cause much irritation or pruritus, and its presence is fre-

quently discovered by the patient accidentally. The insect is usually transferred from one to another in sexual intercourse ; but sometimes by wearing infected clothes, sleeping with an infected person, or in a bed where one has slept, and probably also at the water-closet.

Treatment.—The usual treatment is to anoint the parts freely with *ungt. hydrarg.*, repeating the inunction as often as may be necessary. The ointment kills all the live *pediculi* with which it comes in contact, but does not always destroy the eggs, which, hatching out, prolong the affection for some time. It is well, therefore, to search for the eggs among the hairs, and to remove each affected hair with the scissors. When it can be conveniently done, shaving the affected parts, followed by one or two inunctions, is the most effectual plan that can be pursued. The clothes should be disinfected.

CHAPTER XXIV.

FAVUS.

FAVUS is an affection characterized at its commencement by the appearance of small white specks or points, usually upon the

scalp. These specks in a few days increase in size, become yellow in color and umbilicated, forming small crusts, the umbilication being traversed by a hair, or, if the hair be absent, it will be found to correspond to the mouth of a hair-follicle. The crusts gradually augment and project somewhat above the level of the skin. If one of them be removed, it will be found to have somewhat the form of a concavo-convex lens, its upper surface having a marked concavity surrounded by an elevated border. Its under surface is convex, and the convexity will be found to correspond to a small depression in the skin from which it was removed. Other crusts appear in the neighborhood or scattered over different parts of the scalp, and gradually increase in size. Contiguous ones join by mutual extension so as to form a mass of considerable proportions mottled over with little depressions perforated by hairs. As the disease further advances, portions of the crusts drop off, carrying with them some of the hairs. Ultimately the crusts disappear, leaving a surface at first somewhat reddened, but afterward white, dry, atrophied, and cicatricial in aspect and deprived of hair. The progress of the disease is extremely slow, and when un-

interfered with by treatment, may last for ten or twenty years. The principal seat of the affection is in the hair-follicles. These are gradually destroyed, and of course permanent baldness is the result. Favus of the scalp attacks children by preference, being but rarely found in adults as a recent affection. It is highly contagious, and may be transferred directly from one to another, or by means of caps, brushes, etc. The affection is not confined exclusively to man, but appears to originate in the mouse. Cats who catch mice diseased in this manner become infected from them, and children playing with the cats contract in turn the disease from the latter.

Favus, however, is not limited to the scalp, but may appear upon any part of the body. When it occurs upon non-hairy parts, or more strictly upon parts furnished with but fine and rudimentary hairs, as the general surface, it commences as a small, red, very slightly raised spot. This enlarges and becomes a little scaly until it has reached a diameter of from half an inch to an inch. Upon this reddened patch small white points not larger than pin-heads appear. These increase in size and develop into the characteristic sulphur-yellow umbilicated crusts. This epidermic favus appears to

attack adults as freely as children. The affection may also invade the nails.

Favus is usually accompanied with a certain amount of pruritus, rarely severe, which leads to scratching and the transfer of the disease from one part to another.

Etiology.—Until about thirty-five years ago favus was considered a pustular eruption whose nature was extremely obscure. It is now known to depend upon a parasitic fungus which has received the name of *achorion Schönleinii*. It consists of round or ovoid spores about $\frac{1}{3000}$ of an inch in diameter, which may be isolated or joined together in chains of two or more, and of mycelial tubes, simple or branched, empty or containing spores. In addition a considerable amount of fine granular matter. (Plate I., Fig. 1.)

The spores penetrate deeply into the hair-follicle, even to the bottom, where their further multiplication causes destruction of the hair-roots and finally of the papilla. They sometimes invade the bulbous portion of the root itself, but rarely to any extent, and probably never involve the free portion of the shaft. When the growth has filled the follicle, it appears at its orifice as the white speck already alluded to, and by still further

increase constitutes the substance of the typical crust.

Treatment.—The treatment of favus is simple, and, if properly carried out, effectual. Naturally, the indication is to destroy the parasite, and to accomplish this we may proceed as follows: In the first place remove the superficial crusts. This is effected mechanically by scraping them off with the point of a pen-knife or small spatula. As many of the crusts are quite firmly attached, and their forcible removal is somewhat painful, it is well to loosen them previously by the application of a poultice for a day or two, or a few frictions with oil. After the crusts are all removed, the affected parts may be smeared with sulphur or mercurial ointment. This will destroy the parasite upon the surface, and so long as it is employed there will be no *appearance* of the disease, and the case will seem to be cured. If it is stopped, however, under this supposition, the disease will in two or three weeks again become manifest, and in a short time be in as bad a state as before treatment, due to the fact that the hair-follicles still contain the spores in abundance. It is necessary, therefore, to dislodge them from these retreats. While the follicle is filled with

a hair surrounded by a compact mass of fungus, it is of course impossible for any remedial agent to gain access to it. This necessitates removal of the hairs, which is readily accomplished with the aid of the epilation forceps (Fig. 5). If the disease be at all extensive, epilation of the entire surface at one sitting is generally impracticable. It is better to commence systematically, and remove *every* hair from a limited area, and, when the patience of the surgeon or of the patient is exhausted, to desist from further epilation, and to apply to the denuded spot some lotion or ointment for the purpose of destroying the spores *in situ*. For this purpose nothing is more convenient than a simple solution of bichloride of mercury (one per cent.) thoroughly rubbed in. The hair-follicles, being deprived of their hairs, permit the ready entrance of the solution, which, coming directly in contact with the spores, destroys them, or perhaps simply kills the epithelium, which, when exfoliated, carries with it the infiltrating spores. The following day another portion of the scalp is denuded and the lotion applied, as before, to the portion just epilated as well as to the first. This procedure is repeated day by day until the whole of the affected spots have been deprived of hair. If

now *all* the hairs have been extracted and the lotion has been effective in destroying the interfollicular fungus, of course the disease is at an end. This consummation, however, is rarely obtained so easily, as many hairs will have probably broken in the attempt at extraction, and their diseased roots be still left in the scalp. These of course would constitute new foci of disease. It is therefore necessary to continue the use of the lotions or ointments, until the broken hairs have grown to a sufficient length to permit of being grasped by the forceps. After a week or more, therefore, the epilation should be resumed and repeated a third or fourth time, if necessary. Finally, if the hairs which begin to grow present a healthy appearance, treatment may be suspended ; but the patient must be kept under observation, and the first indications of relapse immediately taken in hand. If this treatment be carefully and correctly carried out, we may hope for a radical cure of the disease in from three to six months.

In favus of the general surface, epilation is unnecessary, and in fact impossible, except the eruption be upon the chest or other specially hairy parts. All we need to do is to pick off the crusts, and make a few applications of the tincture of iodine.

When the disease attacks the nails, they should be gently scraped or filed down until the fungus is exposed, when the bichloride or the iodine may be applied.

CHAPTER XXV.

TRICHOPHYTOSIS.

UNDER this title will be described what are commonly spoken of as four separate affections, denominated respectively Herpes or Tinea Tonsurans, Parasitic Mentagra or Sy-cosis, Herpes Circinatus or Tinea Circinata, and Eczema Marginatum. As these four are in reality but one affection, and differ from each other in aspect and certain clinical peculiarities, solely in consequence of the different localities upon which they are found, and as they all owe their origin to one and the same fungus, called the *trichophyton tonsu-rans*, it seems to us better to give them the general title of *trichophytosis*, with specific appellations indicating locality. We therefore propose the names, *T. capitis*, *T. barbæ*, *T. corporis*, and *T. genito-cruralis*, and shall first speak of the parasitic fungus to which they owe their origin.

Trichophyton tonsurans. — This fungus, like the *achorion Schönleinii*, consists of spores and mycelium. The spores are mostly round, and much smaller than those of the *achorion*; and the mycelium is not usually as abundant nor as luxuriant. The favorite, in fact, the special seat of the growth is in the hairs and hair-follicles, and to a very slight extent among the epidermic cells of the surface. After it has gained a lodgment in the follicle, it almost immediately invades the hair-root, infiltrating it abundantly and propagating itself upward toward the surface, and forcing its way among longitudinal fibers of the hair. This upward growth of the spores continues until it has extended a short distance (one-sixteenth to one-eighth inch) above the surface of the skin. The hair-shaft, no longer possessing the support of the follicular walls, yields at this point to the rupturing force of the parasite and breaks off, leaving a ragged and brush-like extremity protruding from the follicle. The degree to which the hairs are involved varies with the character of the hairs and the localities which they occupy. (Plate I., Fig. 2.)

The four varieties of trichophytosis present certain common features. They are all con-

tagious, and may be transmitted from one person to another, from man to certain animals, and from certain animals to man. A given variety may reproduce its like, or on the other hand, either of the other varieties, and several varieties may coexist upon the same person. The *trichophyton* never gives rise to favus, nor the *achorion Schönleini* to trichophytosis.

Trichophytosis capitis.—This variety is characterized by the appearance upon the scalp of small, round, white and scaly patches, apparently deprived in part or wholly of hair. The patches extend in a centrifugal manner with greater or less rapidity. The scales are small and plentiful, and, to a certain extent, mask the remains of the hairs. Upon close inspection, however, innumerable short hair-stumps will be perceived projecting a little above the surface. The appearance of this stubble is very peculiar. The broken hairs do not resemble healthy ones of the same length, such as would have grown out after shaving, but are lusterless, without polish, and of a lighter color than the neighboring healthy hair. Their extremities are rough and often brush-like, due to the splitting up of the shaft and separation of its fibers by

the spores of the *trichophyton*. Sometimes a few hairs of normal length will be found scattered over the affected surface. The patches increase in size, and others appear in the neighborhood, and if contiguous, soon fuse together until more or less of the scalp is involved, when the appearances noticed in the smaller patches are observed over the whole. The ultimate result, if unchecked by treatment, is involvement of the whole scalp, with destruction of the hair-follicles and permanent loss of hair. *Trichophytosis capitis* occurs almost exclusively in children and young persons; rarely, if ever, in adults. The affection is exceedingly contagious, the most so of any of the vegetable parasitic affections, and is frequently conveyed by the use of hats, brushes, etc., which have been previously used by persons affected. If a patch commence near the border of the scalp, by further extension it may spread down upon the hairless portions of the skin, in which case the portion beyond the scalp presents the features peculiar to the third variety, *T. corporis*. *T. capitis* and *T. corporis* may coexist extensively in the same patient.

Treatment.—The hair being specially involved in this affection, epilation is absolutely

necessary ; but owing to the disorganized and fragile condition of the hair-stumps, thorough epilation is exceedingly difficult, as the slightest traction upon the stumps often causes them to break and leaves the root in the follicle. Epilation, however, must be attempted and carried out with as much gentleness and care as possible, and after removal of as many hairs as practicable, a parasiticide lotion, as the bichloride or iodine, should be applied. As many of the roots of fractured hairs remain in their follicles after the first epilation, it will be necessary to wait until they have grown out again and are capable of being extracted, the parasiticides being kept constantly applied. These cases, therefore, require very frequent attention, and are rarely completely eradicated, when extensive, in less than from three to six months. Suspension of the treatment prematurely involves an inevitable relapse. After the destruction of the parasite the hair will again grow normally in the follicles which have not been too much disorganized by the fungus.

Trichophytosis barbæ.—This affection constitutes one of the varieties of the so-called sycosis, mentagra, or “barber’s-itch.” The other variety has been already considered

(p. 50). It appears upon the chin, upper lip, and cheeks of adult males, first as a very slightly elevated patch, reddish and slightly scaly. This extends centrifugally, and, if the hairs are sparse, exhibits a tendency to heal in the center, forming a ring, whose advancing periphery is a little more raised than the rest. If, however, the hairs are plentiful, it mows them down as in *T. capitis*, and leaves nothing but a brushy stubble. If these short stumps are extracted with the forceps they exhibit a striking contrast to the extracted hairs in eczematous sycosis. In *T. barbæ* the shaft is often extracted with but half the root attached, while in eczema *barbæ* the whole root comes out, and is frequently accompanied by its root-sheaths.

In addition to the appearances noticed in the early stages of *T. barbæ*, others become prominent as the disease advances and constitute very characteristic peculiarities. These are papules, tubercles, pustules, small abscesses, and even ulceration, which are frequently present to such an extent as to render the affection exceedingly disfiguring and disgusting. Some of these lesions are rarely absent in advanced cases, and are the result of inflammatory reaction induced by the irritation

of the fungus. Their severity will of course vary with the individual peculiarities of the patient; some cases presenting little more than the special trichophytic appearances, while others may exhibit the secondary lesions to a very marked degree.

T. barbæ is of course contagious, and is frequently transferred from one to another in barber-shops by means of unclean shaving appliances. It has also been contracted from the other forms of trichophytosis, and from the lower animals.

Treatment.—The treatment of this affection involves the relief of the inflammatory lesions, and the destruction of the parasite. The first is to be accomplished by opening any abscesses that may be present, incision of the papules and tubercles, and the application of cataplasms and emollients to hasten their resolution. The second is achieved by epilation and parasiticides. After the complete eradication of the fungus, indurated nodules may remain for a considerable period, and show very little tendency to undergo resolution. In these cases, stimulating applications, the constant galvanic current, etc., will prove beneficial.

Trichophytosis corporis.—This affection, also called *tinea circinata*, *herpes circinatus*,

and ringworm, commences as a slightly scaly erythematous spot, upon some portion of the general surface usually spoken of as hairless, but which is really provided with rudimentary and downy hairs. In some cases, the erythema may seem to be level with the surrounding surface, but in others quite an appreciable degree of elevation may be present. As the spot enlarges, it shows a tendency to heal in the center, so that in a short time we find a reddened ring circumscribing apparently healthy integument. The ring enlarges indefinitely until it may have attained a diameter of several inches. At last it begins to die out at various points along its periphery, making the ring incomplete until finally it disappears entirely. In the meantime, however, other rings may arise elsewhere, and exist in any number, and if contiguous may coalesce at some point of their circumference and form a figure 8, or if several rings unite, various irregular figures may result.

Trichophytosis corporis, though more frequent in children, occurs also in adults. In children it may coexist with *T. capitis*, and in adults with *T. barbæ* and *genito-cruralis*. *T. barbæ* may give rise to *T. corporis* in women

and children in kissing. The affection may also be contracted from the lower animals.

The *treatment* of *T. corporis* is exceedingly simple, a few applications of the tincture of iodine being sufficient to remove it. If the color of this substance is objected to, applications of bichloride, or of mercurial or sulphur ointment may be employed instead.

Trichophytosis genito-cruralis. — This affection is located, as its name implies, in the genito-crural region, and usually commences as a slightly elevated erythematous patch at the upper part of the thigh. As the patch increases it pales in the center, forming by this means a ring whose advancing border is sharply defined or more elevated than the other portions. The ring may increase in size, and descend for some distance upon the thigh, or mount upon the abdomen. The natural moisture of the parts is increased by the irritation of the fungus, and together with the macerated scales, and perhaps crusts, causes the eruption to resemble an eczema. As the affection advances the hairs become disorganized, and papules, vesicles, and pustules may make their appearance.

Treatment.—The treatment is simple, and involves the fulfillment of the same indica-

tions as the other forms. Epilation and iodine, or frequently iodine alone, will bring about a cure. Shaving the part and the free use of the following ointment have answered well in my hands :

R̄ Hydrarg. sulph. flav...1. (gr. xv)
Vaseline.....30. (ʒj)

M

In India, where this affection is extremely common and troublesome, the favorite remedy is goa powder. It may be used in ointment as follows :

R̄ Goa powder.....2. (ʒjss)
Vaseline 30. (ʒj)

M

Melt in a water bath for an hour with frequent stirring, and afterward stir continually till cold. Apply to the diseased parts twice a day. Instead of goa powder its active ingredient chrysophanic acid may be employed instead in the same proportion, or the following to make a thin paste :

R̄ Chrysophanic acid.....1. (gr. xv)
Glycerini(q. s.)

M

CHAPTER XXVI.

PHYTOSIS VERSICOLOR.

THIS affection is usually called *pityriasis versicolor*.

Phytosis versicolor commences by the appearance of small, irregular, yellowish-brown spots, very slightly, if at all, elevated above the surface of the skin, and covered with scarcely perceptible scales. It usually begins upon the chest, extends gradually over the whole of this region, mounts upon the neck, and descends to the abdomen. It may also stretch round to the back and cover this region. It never invades the face, and rarely the limbs. The affection may consist of a few large patches, with very frequently a large number of smaller ones upon the outskirts, or it may be composed almost entirely of macules, from the size of a pea to that of a dollar. The affection is slow in progress, occupying months and even years before it becomes generalized over the trunk. It is sometimes accompanied by a slight amount of itching. The affection

is most likely to occur in those who are warmly clad, and wear flannel next to the chest, and who at the same time are negligent in matters of cleanliness. It rarely, if ever, occurs upon those who make a practice of bathing the chest daily. Phytosis versicolor is not very contagious.

Etiology.—The affection is produced by the development of a fungus whose spores and mycelium are infiltrated among the horny cells of the epidermis. The fungus has received the name of *microsporon furfur*. The spores are, as the name implies, exceedingly small, but of varying size, and uniformly round; the mycelium is sometimes simple, and sometimes branched. It is readily detected by scraping a few scales from the surface, macerating them in ether and alcohol to remove the oil, and afterward examining them microscopically with an amplifying power of five hundred diameters. The spores are found only in the epidermis, and do not invade the hair-follicles or hairs. (Plate I, Fig. 3.)

Treatment.—The treatment of phytosis versicolor is exceedingly simple, and if properly carried out, always successful. The indication is to destroy the parasite. As the fungus involves neither the hair nor the follicles,

epilation is unnecessary. All we require is a parasiticide, or, as we should prefer to call it, an *epidermicide*. The tincture of iodine answers the purpose admirably. It should be applied until the epidermis commences to desquamate. When this occurs, a warm bath, plenty of rather alkaline soap, and good friction will remove most of it. A fresh application of the iodine, if the first has not been sufficiently effectual, should be employed, and the affection carefully watched for some weeks, suspicious spots receiving renewed applications as may be necessary. It is also well to wash the surface frequently with undiluted sulphurous acid. Goa powder acts with great promptness in this affection. The garments worn next the skin should be changed every few days and thoroughly disinfected, or better, destroyed. A few weeks' faithful attention will usually be sufficient to complete the cure.

The parasitic affections of vegetable origin unquestionably develop with greater readiness in those who are debilitated, or out of health from any cause. Tonics, therefore, including cod-liver oil, etc., often prove of great service in checking the spread of these affections.

Fig. 1.

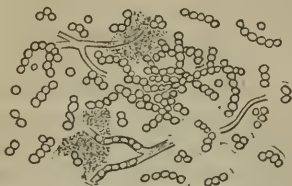


Fig. 2.

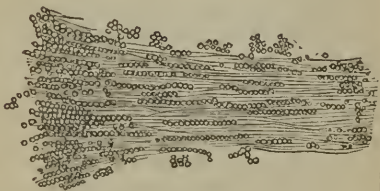
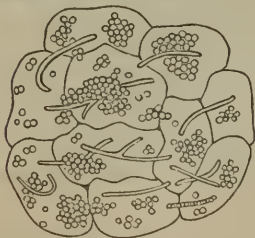


Fig. 3.



CHAPTER XXVII.

IMPETIGO CONTAGIOSA.

THIS affection usually commences by the appearance of constitutional symptoms of a pyrexial character, varying in severity in different cases. In two or three days, one or more small vesicles may appear upon any portion of the cutaneous surface. They gradually enlarge, and two or three days later dry into thin, light-yellowish or straw-colored scabs or crusts. The vesicles and crusts may be indefinite in number, and successive eruptions may prolong the disease for several months. During the progress of the affection, associates, adults as well as children, may become the subjects of a similar eruption, showing it to be decidedly contagious. Inoculation with the fluid contained in the vesicles will produce similar lesions, both upon those who are already affected and upon others.

The affection sometimes closely follows vaccination.

Removal of the impetigo crust reveals a slightly reddened surface, with very little or no moisture, and no ulceration or even erosion

of the surface, the lesion being extremely superficial. After the spontaneous fall of the crusts a bluish-red macule or stain is left, which persists for some little time.

The affection is sometimes accompanied with a moderate amount of pruritus.

Etiology.—Upon microscopical examination the crusts of impetigo contagiosa are found to contain many fungoid bodies ; the crusts of vaccinia display the same. This fact and the frequent occurrence of the impetigo as a sequela of vaccination render it probable that the two affections are closely connected, and that the fungus from the latter has something to do with the propagation of the former affection.

Treatment.—The treatment of impetigo contagiosa is very simple ; all that is necessary is to remove the crusts, and apply a mercurial or sulphur ointment two or three times a day, and in a short time all traces of the affection will disappear, except the bluish-red discolorations which mark the seat of the eruption. These gradually fade, and ultimately the skin assumes a normal aspect, without mark or scar.

CHAPTER XXVIII

ERYTHEMA.

THIS name is used to designate any non-elevated hyperæmia of the skin. The condition may be due to a variety of causes, as vigorous friction, or the application of irritant, acrid discharges, etc. The congestion which results from a slight burn, if blisters do not form, may also be called erythema. Numerous other local causes may produce this condition, which is simply characterized by congestion without exudation. The redness vanishes under pressure, to return again the moment the pressure is relaxed. It will be understood then that the simple term erythema is not the name of a particular disease, but rather of a condition which may arise from a variety of causes, and be present in several distinct diseases. It rarely requires any treatment, other than the removal of the cause which produces it.

CHAPTER XXIX.

INTERTRIGO—PERNIO—PARATRIMMA—FURUNCLES.

INTERTRIGO.

INTERTRIGO is the name applied to a condition of the skin which sometimes arises in consequence of prolonged contact of two cutaneous surfaces. It is chiefly met with in infancy and in advanced life, rarely in the intermediate periods, and especially, if not solely, in those who have an excessive development of adipose tissue. In fat children the skin of the abdomen, particularly in the inguinal regions, is frequently in contact with that of the thighs. In these cases the cutaneous secretions, insensible perspirations, etc., instead of passing off in a state of vapor, remain fluid. This fluid undergoes decomposition, and the putrefactive changes result in the formation of certain highly irritating substances. The epithelium of the part, being moist and macerated, affords little protection against the action of these acrid bodies, and they consequently in a short time provoke an intense congestion (*erythema*), frequently accompanied with a

certain amount of thin serous exudation. If this condition is unrelieved, vesicles or pustules may form, and still further prolongation of the trouble may induce more or less superficial ulceration, occasionally, however, extending through the whole depth of the skin. The ulcerated parts secrete a thin sero-purulent fluid which mingles with the cutaneous secretions. The condition of the child's general health will modify to a certain extent the appearances presented. This affection is not confined to the parts already mentioned, but may occur wherever two cutaneous surfaces are in contact.

Exactly the same state of affairs may arise in advanced life, in consequence of obesity, sometimes in men, but more frequently in old women whose pendulous breasts and abdomens compel a portion of the surface to be in almost perpetual contact with the integument which they overhang. If now cleanliness is neglected, the affection is very apt to be sooner or later developed.

In persons with a rheumatic predisposition, the irritation of the intertrigo may give rise to a frank eczema, which, when fully developed, masks to a considerable degree the features of the primary affection.

Treatment.—In mild cases nothing more is required than the separation of the parts by insertion of a fold or two of linen between them. This absorbs the discharge, and as soon as it becomes foul should be removed. Frequent ablution of the parts should be enjoined, with thorough drying of the surface, after which a little inert absorbent powder, as equal parts of starch and lycopodium, or the ordinary Lubin's toilet powder, should be dusted on. This will in a short time give relief. In more severe cases an astringent application may be employed, such as a powder containing a small amount of tannin. If ulceration be present, decided stimulants may be used, as solutions of sulphate of zinc, nitrate of silver, etc., in addition to the means already indicated. In all cases, however, the utmost cleanliness must be insisted upon, if a relapse is to be prevented.

PERNIO.

Pernio or "chilblain" is a condition of chronic congestion which follows partial congelation, and is apt to prove a very obstinate and annoying affection. It most frequently affects the feet, hands, ears, and nose (in this latter situation simulating rosacea). The

lesion is usually accompanied with more or less pain of a burning character. Pernio is much worse in winter than in summer, and in fact may disappear entirely during the warm months, to return upon the advent of cold weather, and give more or less trouble until spring again arrives. It may in this way recur for several years. Pernio is sometimes accompanied with fissures and ulcerations, due to the diminished vitality of the affected skin. The *treatment* usually recommended is the application of stimulating ointments or lotions, if the parts be ulcerated or cracked; but if the surface be unbroken, frictions with turpentine or camphor will prove of service. Galvanism is a useful adjuvant.

PARATRIMMA.

This name is applied to the passive congestion of the skin which results from long-continued pressure, and more particularly to that which precedes the formation of "bed-sores." In some persons of feeble vitality, if long confined to bed, and especially if forced to maintain an unvarying position, the parts of the skin upon which the greatest amount of pressure is exerted become reddish or bluish-red. If this condition is unrelieved the skin

ultimately ulcerates, and the destruction of tissue may be both extensive and profound.

Treatment.—The measures best calculated to prevent the development of *paratrimma*, or, if it have appeared, to obviate its results, are mechanical. The pressure upon the parts must be relieved, and applied elsewhere. This may be effected by properly constructed pads or air-cushions. A water-bed answers the purpose still better, as it distributes the pressure equally over the whole surface.

FURUNCLES.

Furuncles or “boils” are small or moderately sized red and painful inflammatory elevations of the skin. They sometimes seem to occur spontaneously or without apparent cause, and at other times in connection with a debilitated state of the system. They also frequently occur during a prolonged course of hydropathic treatment. It is not unusual for two or more furuncles to occur at once, or they may appear in successive installments and prolong the trouble for weeks or months.

After the first appearance of the boil, which may have been preceded by a sharp stinging sensation followed by pruritus, the swelling becomes more perceptible and hard. In a day

or two a whitish speck appears at its apex. This gradually enlarges until nearly the whole tumor becomes purulent with consequent softening. Later the abscess, for such it now is, bursts, and discharges its contents, mainly pus, with in addition a firm, whitish substance called the "core." Reparative action then commences and recovery takes place, leaving a scar corresponding to the size of the lesion.

Treatment.—Furuncles may sometimes be caused to abort. If a stick of nitrate of silver be freely applied to a commencing boil it will very frequently give immediate relief by inducing involution without suppuration. If, however, this method is not practiced, or if it does not succeed, recovery will be hastened by deferring incision until the very last moment. If the boil be opened before it is fully "ripe," the pus which has formed will be discharged, but the central slough or "core" will remain attached by its deep extremity, and it is necessary for the opening to again close, and a new accumulation of pus to take place before the core is loosened. When fully mature, however, the core comes out with the pus, and reparative action commences at once. General treatment is sometimes successful in preventing recurrence. Tonics are clearly indicated, together

with dessert-spoonful doses of the "syrup of the hypophosphites," or the sulphide of calcium in small doses every few hours.

CHAPTER XXX.

LICHEN TROPICUS—NÆVUS—TELANGIECTASIS—VERRUCÆ.

LICHEN TROPICUS.

THIS affection, commonly known as "prickly heat," is met with in hot climates generally, and also in the United States, chiefly during the months of July and August. It appears as small red pointed papules scattered over the surface, and sometimes interspersed with small vesicles. The neck, face, arms, and legs appear to be the portions most frequently and severely affected, though no parts are exempt, except the scalp, the palms of the hand, and soles of the feet. The eruption itself is insignificant, but as it is often accompanied with severe itching and pricking sensations, it demands relief. The affection is manifestly connected with a high temperature, and it may

be expected when the average heat runs above 80°.

The anatomical seat of the affection has not been positively determined. The affection is to be distinguished from scabies and eczema, the only diseases with which it is liable to be confounded by the inexperienced.

Treatment.—Generally relief can be afforded by sedative applications, as the *lot. plumbi et opii*, or the *lot. flava*. If troublesome at night, comfortable rest can usually be secured by a small dose, 0.03 (gr. ss.) of opium, and sometimes decided amelioration. Free action of the bowels and kidneys is likewise of great service. We have also seen the most marked benefit from two or three Turkish baths.

NÆVUS.

This name is applied to certain congenital anomalies of the skin, and embraces excessive localized developments of the capillary blood-vessels, of the pigment, or of the hair. These three varieties usually exist separately, but the features of all three may be combined in the same lesion.

Nævus Vascularis.—This appears under two forms: first, the superficial, non-elevated

variety, characterized simply by its reddish or bluish color, forming a strong contrast with the surrounding skin. To this the name of "wine mark" is commonly applied. These marks are perceptible at birth and subsequently increase, remain stationary, or disappear. Though more frequently occurring upon the face, they are met with on all parts of the body.

Treatment.—If quite small, they may be removed by touching with nitric acid; but if large, they have until recently been rarely meddled with. Lately, however, Squire, of London, has recommended a method which seems to promise well. It consists essentially in scarifying the affected skin, and in this way destroying the vessels. Sherwell, of Brooklyn, tattoos the patch with carbolic or chromic acid in strong solution.

The second variety of vascular nævus is characterized by more or less elevation and the presence of much larger vessels than in the first. In this form the affection may also increase, remain stationary, or retrograde. By increase or rupture of the vessels it sometimes becomes perilous to life. *Treatment* therefore is frequently called for. A great number of methods have been employed, but

the best results are obtained from the use of the actual cautery or of electrolysis.

Nævus Pigmentosus.—This form consists in an excessive localized deposit of pigment. It is of little consequence, except as a blemish when located upon uncovered portions of the body. Occasionally it becomes the starting-point of a melanotic tumor ; unless this occurs it is rarely meddled with.

Nævus Spilus.—This is an excessive localized development of hair, and is frequently associated with and complicates the last form. It demands no treatment.

TELANGIECTASIS.

This is an acquired lesion, that is, not congenital, and consists in a few enlarged cutaneous capillaries, located upon the face or other parts of the body. The little bright papule may be single or multiple, and varies in size from a pin-head to a small pea.

These little affairs rarely appear before adult life, and are of little consequence, except as a blemish. If their removal is desired, this can be readily effected by puncture with a red-hot needle.

VERRUCÆ.

Verrucæ or "warts" are papillary excrescences of the derma, due to hypertrophy and prolongation of the papillæ, with hyperplasia of epidermis. Their favorite seat is the fingers and hands. They may, however, occur elsewhere, as upon the forearms and other parts of the body.

The *cause* of their growth is unknown. They sometimes undergo spontaneous involution, and disappear as mysteriously as they came.

The *treatment* usually recommended is to pare down the wart with a sharp knife, to the level of the surrounding skin, and then to apply some caustic, as the nitrate of silver, or glacial acetic, or one of the mineral acids, repeating the application until the wart is destroyed. The chloride of ammonium frequently applied will sometimes remove them.

CHAPTER XXXI.

ALOPECIA AREATA.

THIS disease usually commences by the appearance upon the scalp of a small spot entirely deprived of hair. The spot, when first noticed, may not be larger than a three or five cent piece. It rapidly extends, and in a few days may be an inch or more in diameter. The hair is entirely absent, having come out by the roots, not, as a rule, broken off just above the surface as in trichophytosis. The affected part may be slightly reddened and a little elevated, or it may be of the same color as the rest of the scalp, and on a level with it, or it may be a shade paler and very slightly depressed. Other spots may appear in the neighborhood or in the beard or elsewhere. The further extension of the affection results in the fusion of the separate spots. In this way extensive and irregular patches are formed. The affection may go still further, until the whole scalp is deprived of hair, and in fact until every hair upon the body has disappeared. Occasionally the first fall of the hair may be succeeded in a short time by a somewhat

scanty growth of unhealthy-looking, light-colored or even white hair, which soon falls and gives way to a perfect alopecia of *indefinite* duration. I say indefinite, because in some instances the baldness is permanent, while in others a new growth of hair seems to occur spontaneously after a variable period, and may even attain its pristine luxuriance. The affection occurs in youth and also among adults, but I have never observed it in advanced life. It is not accompanied with pruritus or any local or general symptoms, and is not known to be connected with any special internal derangement. It is sometimes encountered in connection with trichophytosis.

Etiology.—The nature and causes of this affection are obscure. Some believe that it is caused by a parasite which they call the *microsporon Andouini*; others claim that it is due to a localized innutrition from failure of nervous influence. The evidence offered in support of these diverse views is too conflicting to permit at present any positive deduction.

Treatment.—For purposes of treatment it is of little consequence what view of its nature we may entertain. It will usually recover under the following: First, epilate the marginal hairs, and any fine ones that may be visible

upon the surface of the patch ; next, blister the denuded part with cantharides, and as soon as the blister has healed shave the surface every four or five days (if there is anything to shave), and use twice a day frictions with the following :

R̄	Hyd. sulph. flav.....1.	(gr. xv)
	Cerati.....30.	(ʒj)

If there is no decided improvement at the end of four or five weeks, repeat the blister. The constant galvanic current is a useful adjuvant to other treatment.

CHAPTER XXXII.

ERYTHEMA MULTIFORME—ERYTHEMA NODOSUM.

ERYTHEMA MULTIFORME.

THIS eruption consists of patches of redness, over which circumscribed elevations, also red, are scattered. These elevations may be few or plentiful, and may vary from 3^{mm} to 18^{mm} ($\frac{1}{8}$ "– $\frac{3}{4}$ ") in diameter. The small ones may, according to size, be called papules or tubercles ;

while the larger ones, which are always flattened, may be depressed in the center, and assume the appearance of an elevated ring. Sometimes vesicles are met with.

These various lesions rarely persist for a week or ten days, at the end of which time they gradually subside and disappear, leaving after them bluish stains which may last a few days longer. The initial crop may be succeeded by others, and thus prolong the trouble for several weeks.

Treatment.—Erythema multiforme usually runs its course in two or three weeks, and in the majority of cases appears to be uninfluenced by treatment, and it is only in relapsing cases, and those which show a tendency to return at certain seasons of the year, that it is worth while to attempt much in the way of medication. Quinine and arsenic are sometimes of service.

ERYTHEMA NODOSUM.

This disease is characterized by an eruption of reddish tumors from the size of a bean to that of an egg, and usually situated upon the lower extremity between the knee and ankle. For a day or two the depth of color increases, then becomes somewhat purplish, with the "black

and blue" appearance which accompanies contusion, and finally passes through shades of green and yellow like an ordinary bruise. A week or ten days may be occupied by these processes, and as the color changes, diminution of size takes place, and in about two weeks complete resolution is effected.

The number of the tumors is usually limited to three or four, but may reach nine or ten. Although preferring the leg, the eruption has been met with upon the thigh, forearm, and abdomen. The swellings are usually a little painful for the first day or two, but not afterward. Relapses may prolong the disease for several months. Febrile prodromata occur in some, but not in all cases. The affection usually occurs in young females, and is frequently accompanied with menstrual derangements. In many cases, however, the affection is preceded by, or complicated with, arthritic pains. This has led some to believe the affection to be more or less closely connected with rheumatism.

Treatment.—*E. nodosum* requires very little special treatment in the majority of cases. If it be preceded by febrile symptoms, these may require a little attention. Locally, nothing more is required than a simple evaporating

lotion, as the *lot. plumbi et opii*, or something similar. If the eruption, however, is accompanied with rheumatic symptoms, alkalies and colchicum will be appropriate.

CHAPTER XXXIII.

ELEPHANTIASIS. (*Arabum.*)

THIS name is given to a disease characterized by great hypertrophy of the skin and subcutaneous tissues of the lower limbs and genitals,* an affection which is specially frequent in certain tropical countries, but met with occasionally in the temperate zones.

Course.—The course and symptomatology vary somewhat in different cases. In the majority, however, the disease is ushered in by a chill followed by a febrile attack. These symptoms are accompanied by inflammatory swelling of one of the legs, somewhat resembling a mild erysipelas. After a few days the febrile symptoms subside, followed by more

* Somewhat similar enlargements occur elsewhere, but it is doubtful if the process or the affection is the same as the one under consideration.

or less complete disappearance of the local inflammatory trouble. As a rule, however, the swelling does not entirely disappear, but leaves the leg a little larger than before the attack. After a varying and uncertain period, which may be a few weeks or even months, a recurrence of the febrile attack takes place with renewed swelling of the limb. Again the abatement of the symptoms leaves the limb a little larger than before.

These phenomena are renewed from time to time, each recurrence being followed by a permanent addition to the size of the affected member. Later the febrile attacks cease, but the limb nevertheless continues to slowly enlarge until it may ultimately attain an immense size. Sometimes the affection is confined to the foot and ankle, or to the foot and leg, or again the thigh may be involved. Occasionally both limbs are affected, but as a rule the disease commences in one, long before it appears in the other. In addition the scrotum or penis, or both, may likewise enlarge, *pari passu*, with the diseased limbs, or the genitals may alone be affected. In the female the labia majora, to a less extent the labia minora, may undergo the same changes.

Treatment.—Palliative and antiphlogistic

measures during the febrile attacks are of course indicated, and quinine in large doses, alone, or in combination with opium, would seem to be the remedy most likely to control or moderate the symptoms. In the intervals between the paroxysms, and in the later stages of the disease, internal medication appears to be without influence. Local treatment alone gives promise of relief. If the lower extremity be the part affected, methodical compression by a bandage or elastic stocking will palliate the trouble to a certain extent, but is not likely to prove curative. Ligature of the femoral artery has been repeatedly tried but with varying results. If the genitalia are affected, amputation of the redundant parts affords efficient and permanent relief.

CHAPTER XXXIV.

KELOID—LICHEN PLANUS—LICHEN RUBER—
LICHEN SCROFULOSORUM.

KELOID.

THIS affection is characterized by the development upon the skin of one or more flat-tish, smooth-surfaced tumors of varying shape

and size. In some cases the natural color of the skin is preserved, in some it is heightened, but more frequently it is a trifle paler than the normal, or it may be quite white, often possessing a marked cicatricial aspect. In fact if it were not for its elevation, keloid might often pass for an ordinary cicatrix. Sometimes arms or processes project from the main body of the tumor, as thin bands into the surrounding skin.

The keloid tumors gradually increase in size up to a certain point, at which further progress ceases. They then remain stationary for the rest of the patient's life. In very rare instances they undergo involution and finally disappear.

Keloid may arise spontaneously, or subsequent to some wound or local irritation of the skin, and writers have consequently distinguished two varieties of the affection : the one which originates spontaneously being called *true keloid*, and the other *spurious*.

Treatment.—At first thought excision would seem to be an appropriate measure of relief ; but experience has shown that in the great majority of cases the disease will certainly return, and often more extensively than at first. Excision, therefore, should not be regarded

as likely to result in a radical cure, and should only be employed when the situation, or great size of the tumor, renders its removal imperative, or when the temporary relief thus gained more than counterbalances the inconveniences of an operation. Removal by caustics promises no better results than the knife. It must be admitted then that we are without any means, that can be relied upon, which will enable us to successfully control this curious disease.

LICHEN PLANUS.

This is a somewhat rare disease, and is characterized by the development of flat papules upon various parts of the body. They are usually of a dull red or somewhat purplish color with a characteristic central depression. The affection greatly resembles certain papular syphilides, and in fact a diagnosis between the two may be exceedingly difficult, if we judge by aspect alone. The concomitant symptoms and the history may alone enable us to judge between the two affections. The affection is essentially chronic in its course, and the papules upon subsiding leave dark stains, which persist for some time before finally fading away.

Treatment.—Concerning this, Wilson, who has had an extensive experience with this disease, says: “Our first object should be to regulate the functions of the economy wherever any disorder may be apparent; in the next place we should endeavor to restore the vigor of the system by tonic remedies, such as bitters, quinine, nitro-muriatic acid, and chalybeates; and these objects being effected, we may finally have recourse to the tonic-nutritive operation of arsenic.” Locally he recommends a lotion of the bichloride of mercury (two grains to the ounce of bitter almond emulsion). The eruption is frequently rebellious, but usually yields in the end to treatment.

Taylor has recently contributed the result of his observations concerning lichen planus, and has derived benefit from the use of oxidizing agents and alkaline diuretics.

LICHEN RUBER.

This name is given to an eruption to which attention was first called by Hebra. The following description is an abridgment of the one which he gives in the first edition of his work:

The affection consists in an eruption of papules, which always remain such, never changing into vesicles or pustules, and never

undergoing any modification except when the eruption of new papules changes a discrete into a confluent lesion. The papules always present an intense red color except when covered with scales. In the beginning the papules are miliary, and each covered with a fine scale. They never increase in size, but preserve their original volume throughout the whole course of the disease. Fresh papules may arise between the original ones, or at a distance from them. When the papules are in contact, they form continuous patches of variable size and contour, red, infiltrated, and covered with scales. The entire surface may be invaded in this manner. In advanced cases the pruritus may be intense.

The condition of the general health varies with the extent of the eruption. At the beginning it may not be appreciably affected, but as the disease advances, the organic functions deteriorate and nutrition suffers. The appetite or sleep may not be much disturbed, but the subcutaneous fat gradually diminishes, until finally the patient falls into a condition of marasmus, and at last dies. At least this was Hebra's experience with thirteen of the first fourteen cases seen by him. The case which recovered did so while under the prolonged

use of large doses of arsenic. Never having had a case of this disease under treatment, we are unable to offer any therapeutical suggestions.

LICHEN SCROFULOSORUM.

This is another affection first described by Hebra. It consists of miliary papules of a pale yellow or reddish-brown color, though sometimes the normal hue is preserved. The papules are disposed in groups, sometimes forming circles or segments of circles, beyond which pigmentary macules, marking the site of earlier papules, may occasionally be seen. The little elevations are always covered with fine scales. Pruritus is insignificant. The papules promptly attain their maximum development, but then persist unaltered for a long time. At last they gradually disappear, after having existed for months or years. Sometimes tubercles resembling acne, and which may go on to suppuration, develop in the neighborhood of the papules. The epidermis between the groups exfoliates in fine scales. Each papule is situated at the orifice of a hair-follicle, and forms an elevation consisting of a mass of epidermis. The horny cells present a normal aspect, except that they contain a

larger quantity of entangled fatty matters than usual. After the removal of the semi-globular epidermic mass, which constitutes the papule, the open mouth of the piliferous follicle may be perceived with the naked eye. The eruption may occur upon any part of the body.

In about ninety per cent. of the cases met with by Hebra, other scrofulous lesions, as enlarged lymphatic glands, periostitis, caries, etc., were encountered.

Prognosis.—This affection usually terminates by recovery.

Treatment.—Hebra recommends the use of cod-liver oil both internally and externally. He administers an ounce of the oil morning and evening, and applies it locally with a liberal hand. At the commencement of treatment according to Hebra, four frictions a day should be employed, but later two will be sufficient. Warm and vapor baths he found to be prejudicial. In a single personal case prompt amelioration and cure followed Turkish baths, with frequent vaseline frictions and small doses of cod-liver oil and iodine, a much less disgusting treatment than that recommended by Hebra.

CHAPTER XXXV.

PEMPHIGUS—MOLLUSCUM FIBROSUM—MOLLUSCUM CONTAGIOSUM.

PEMPHIGUS.

PEMPHIGUS is an affection characterized by the development of bullæ, from the size of a pea to that of an egg, upon any portion of the body. The bullæ may be few in number, even solitary, or numerous. If many be present at a time, they may frequently be found aggregated in little groups of three or four together. Their contents are usually serous and transparent, but sometimes slightly opaque from admixture of pus.

Of this disease there are two principal forms, namely, *ordinary* and *foliaceous* pemphigus.

ORDINARY PEMPHIGUS.

In this form the bullæ, well distended by fluid, persist unchanged for several days, at the end of which time they rupture, and discharge a thin, not very plastic fluid, differing in this respect greatly from the plastic exudation of eczema. Sometimes the uplifted stra-

tum corneum reapplies itself to the skin, and remains in contact until the surface beneath is entirely healed and covered with a new epidermis. It is then shed and reveals a circumscribed reddened surface, which soon, however, regains its normal color. At other times, the covering of the bulla is detached soon after rupture, and displays a red and oozing surface. This becomes dryer, as a new-formed horny layer replaces the old, when the heightened color gradually fades. After the involution of the bullæ which marked the invasion of the disease, or even before they have entirely disappeared, fresh ones may arise ; or, on the other hand, several weeks or months may elapse before a recurrence of the lesion takes place. These relapses may be somewhat periodical, or entirely irregular, and may prolong the disease for an indefinite period. Finally, either spontaneously, or as the result of treatment, no more bullæ appear, and the patient is well. This favorable termination, however, does not always occur ; but the affection persisting for several years, the patient is carried off by some intercurrent or visceral disease. The autopsies of those who have died while suffering from pemphigus do not exhibit any uniformity of visceral lesion.

Treatment.—Arsenic in gradually increasing doses to the limit of tolerance is the only method of treatment that is of any avail.

FOLIACEOUS PEMPHIGUS.

This form, first described by Cazenave, differs from the preceding in several respects. In the first place, the bullæ are never full of fluid, that is, the epidermic covering is not tense or stretched as in the other, but is somewhat flaccid. They also frequently attain a great size, sometimes forming slightly-elevated flat tumors as large as the palm of the hand. Several bullæ arising in close proximity may, by extension, become confluent, and unite to form a single one of considerable extent, the horny epidermis at the same time appearing to thicken greatly, whether by the formation of new horny cells, or by the simple agglutination of exudation, we do not know.

At first, the eruption is sometimes confined to a limited portion of the skin, but may invade the greater part of the surface during some period of its course.

Treatment.—Same as in ordinary pemphigus, but with less prospect of cure.

MOLLUSCUM FIBROSUM.

This name is applied to certain tumors of varied size and form, which sometimes appear upon the skin. They may be simply semi-globular protrusions, or form sessile tumors with a comparatively small pedicle. In some cases but a single tumor is present, in others two thousand have been counted.

Etiology.—Unknown.

Treatment.—Excision.

MOLLUSCUM CONTAGIOSUM.

This is not a variety of the affection last described, but is a disease *sui generis*. It is characterized by the development of small umbilicated tubercles, or little tumors varying from the size of a millet-seed to that of a pea, or even larger, and frequently pedunculated or sessile. Their color is usually that of the normal skin, but may be a little redder, with sometimes a semi-transparent aspect. Upon some portion of their surface a slight depression can usually be detected, and from it sebaceous-looking contents can be made to exude by pressure upon the base of the tubercle. These growths frequently appear upon the

face, but are also found upon the neck, chest, back, limbs, and genitals. They vary in number from three or four, to twenty or thirty. When numerous, the tubercles do not all appear simultaneously, but successively, developing one after the other, for several weeks or months, so that in advanced cases they may be encountered in various stages. Once developed they may obtain a certain size, and then remain stationary for an indefinite period, or they may dry up and cornify, and the shriveled tubercle remain attached to the skin until removed mechanically. Finally, inflammation and suppuration may result in discharge of the contents and obliteration of the growth, or, more rarely, gangrenous processes may terminate its existence.

Molluscum contagiosum seems to affect by preference young females, but it has been met with in males and upon persons beyond middle age. The affection is unaccompanied with pain, or other subjective symptoms of importance, and appears to be entirely without influence upon the general health.

Treatment.—The tubercles of *molluscum contagiosum*, when discrete, may be readily destroyed by shaving them at the level of the skin, then by pressure forcing out the remain-

der of their contents, and finally touching the base with nitrate of silver or tincture of iodine. When confluent, thorough applications of green soap, or stimulating preparations, such as the bichloride or bin-iodide of mercury, or carbolic acid, will excite sufficient inflammation to bring about their destruction.

CHAPTER XXXVI.

PURPURA—PRURIGO.

PURPURA.

THIS affection is characterized by the occurrence of small purple spots upon the skin, due to circumscribed effusions of blood within the skin. The eruption may occur over the whole body, but is commonly most marked upon the extremities, and may be confined to them. The bulk of the eruption may appear simultaneously, or accessions may occur upon successive days. The spots go through their various changes without interruption, and resorption is complete in a week or ten days. After a variable period a fresh crop

may appear, and this may occur a number of times. Hemorrhage from mucous surfaces, as the mouth, bowels, kidneys, genitals, etc., sometimes complicates the cutaneous affection. These hemorrhages may be so profuse as to seriously modify the prognosis, which is ordinarily good.

Etiology.—Unknown.

Treatment.—In cases of simple purpura very little if any treatment is required, as the affection runs its course in a few days. When, however, the affection exhibits a tendency to relapse, effort should be made to discover the cause of the trouble, and to relieve it if possible. When accompanied by hemorrhages from the mucous surfaces the affection becomes serious, and every means capable of controlling the hemorrhage should be adopted. Great difficulty will be experienced in trying to effect coagulation of the blood by local astringents; they should, however, be employed when practicable. In addition, internal remedies, as the perchloride of iron, tannin, gallic acid, etc., which enjoy a high reputation as hæmostatics, should be given. Ergot is sometimes of service.

PRURIGO.

This name is at present confined to an affection described by Hebra, and met with but rarely in this country. It is characterized by its intense itching and the development of papules of the same color as the skin or a little darker. At the commencement the papules are within, not raised above the skin, and are more easily appreciated by touch than by the sight. They are always isolated and may appear on almost every region of the body. Scratching destroys their epidermic covering and permits the discharge of a transparent or yellowish serum, or, if the papillæ are wounded, the escape of a droplet of blood, which drying forms a small blackish crust. As the disease continues, the color of the skin deepens, and decided pigmentation, where the itching has induced severe scratching, becomes a prominent feature. The natural lines and furrows of the skin become more widely separated and more distinct than in the normal condition ; specially noticeable about the fingers, the backs of the hands, and the wrists. The downy hairs are torn out by the scratching, or broken off and disorganized, and the skin itself is harder and thicker than in health.

In many cases these phenomena, developed to a greater or less extent, constitute the main features of the disease even after many years' existence ; but in other and more exceptional cases, graver symptoms are manifested.

In these latter the first peculiarity is that all the symptoms before mentioned become exaggerated. The papules are larger, the itching more intense, the excoriations more severe, and the number of blackish blood-crusts increased. In addition, we observe a more general brownish pigmentation, and a detachment of the superior layers of the epidermis under the form of a whitish, branny desquamation.

In some cases of this aggravated form of prurigo, a severe eczema may develop over the entire surface, or over the parts principally affected, and mask to a considerable degree the primary affection. In other cases the fluid contents of the papules may become purulent, and give place to pustules whose secretion dries into crusts. If they become confluent, the crust may attain a considerable size, and be accompanied with engorgement of the neighboring lymphatic glands.

Prurigo may commence in childhood and continue during the lifetime of the sufferer,

developing slowly but progressively, and proving one of the most obstinate and terrible diseases affecting the skin.

Treatment.—Though there is little hope of effecting a permanent cure, a certain measure of relief may be obtained by judicious treatment. Hebra says that internal medication is without influence. Benefit, however, will be obtained by the same external treatment as is recommended in psoriasis.

CHAPTER XXXVII.

SCLERODERMA—SCLERIASIS.

UNDER these and similar names two different affections have, we think, been described. The affection to which we will confine the first of these appellations commences as a circumscribed infiltration of the skin and subcutaneous tissue. The part affected is slightly elevated, and the skin of a brownish-red color, with a very slight tendency to a furfuraceous desquamation. Upon touching the part it conveys to the finger a sensation of hardness,

and the skin is found to be cemented to the subcutaneous tissue, and the whole tightly bound down to the muscles, or to the bones if they are near the surface. If we attempt to pinch up the skin in folds, the effort will be as futile as if we tried to pinch up the paint from a board, or the bark from a tree.

As the lesion gradually advances, the portions first affected undergo a change. The elevation subsides, and gives place to a depression, the heightened color disappears, and is replaced, first by a normal, afterward by a much paler hue, and finally by a glistening white. In other words, the hyperplasia which first appeared is succeeded by atrophy. The tightness of the skin, its close approximation to the bone, and its absolute non-mobility become even more striking than in the early stage. If the lesion be situated upon the hands and feet, the shrunken integument may induce permanent contractions of the fingers and toes, with more or less deformity. Sclerosed bands and patches may appear upon several parts, and by gradual extension involve a very large portion of the surface.

When limited in extent, scleroderma does not appear to be specially prejudicial to life or health ; but when extensive, it may be asso-

ciated with visceral and other internal changes, capable of inducing a fatal result.

Etiology.—The cause of this affection is unknown.

Treatment.—Internal treatment appears to be without influence in modifying the affection; externally the application of the constant galvanic current has in several instances proved of service.

SCLERIASIS.

This affection is distinguished from the one last described by the rapidity of its development, and the extent of surface that may become involved within even a few days. Commencing usually, if not always, upon the upper portion of the body, the integument of the thorax and abdomen and the posterior portions of the trunk may become involved in a week or ten days, without extension to the lower extremities. The skin preserves its natural color and sensation, but is tightly bound down to the subjacent tissues as in the former affection.

After a time, in the majority of cases, spontaneous resolution occurs, and the skin returns to the normal state.

Etiology.—Unknown.

Treatment.—The natural subsidence of the affection may doubtless be hastened by bathing and frictions. But beyond these simple measures there is no plan of treatment that can be confidently recommended.

CHAPTER XXXVIII.

STROPHULUS—VITILIGO.

STROPHULUS.

STROPHULUS is an affection that usually appears during early life, and is characterized by the appearance of small papules scattered over the surface. They vary from a pin's head to a millet-seed in size, and frequently appear upon the face, as well as upon the trunk and limbs. The papules are usually red, though whitish ones may sometimes be found scattered among the others, or, in fact, may constitute the main feature of the eruption. Pruritus, usually not very severe, is a frequent accompaniment.

There appear to be two forms of strophulus; one, occurring a few days after birth, in which the papules are quite small, red, and with

barely perceptible elevation, and sometimes accompanied with scattered erythematous patches.

The eruption reaches its height in two or three days, persists a few days longer, and then gradually disappears, its whole course being completed in one or at most two weeks. There is probably a certain amount of local irritation which makes the child uneasy and restless. This affection is very frequent, but is a trivial affair, and rarely calls for any treatment.

The second variety is frequently developed during the early periods of dentition. In these cases the papules are larger, the itching greater, and the affection may persist for several weeks ; at the end of which time it gradually subsides, to be followed occasionally by a second or third attack.

The causes of strophulus are obscure. It may possibly be due in the first variety to the unaccustomed contact of the tender skin of the new-born infant with the air, or to the irritation of acrid soaps, of flannel garments, or from over-excitement of the perspiratory function, by too much warmth or too heavy clothing. In the second variety it results perhaps from unsuitable clothing, uncleanness,

etc., or possibly is a reflex manifestation of gingival irritation.

Treatment.—Very little if anything is required in the way of treatment except the removal of the causes which produced it, if they can be discovered, together with means calculated to allay the local irritation. For the latter purpose alkaline and emollient baths frequently prove useful.

VITILIGO.

This name is confined to an affection characterized by a localized disappearance of cutaneous pigment. It must not, however, be confounded with the congenital anomaly or deformity to which the name of albinism is applied. In this latter affection, the rete cells have never contained pigment, and the affection may be considered as an arrest of development, which may be complete or partial, that is, the child may be born with a skin entirely deprived of pigment, or the absence of pigment may be confined to certain portions only. In vitiligo, however, the affection is not congenital, and may not occur until adult or advanced life.

The occurrence of vitiligo becomes manifest by the appearance of small, circumscribed,

pigmentless spots, the color of which varies from a dead white to a faint rosy hue, the particular tint depending upon the amount of blood circulating in the part. The hair, if there be any upon the spot, loses its color and becomes white. These unpigmented spots are in strong contrast with the neighboring skin, which may preserve its normal coloration, or, as is frequently the case, exhibit an excess of pigment, the greatest excess being close to the circumference of the affected patch. It would seem that in these cases the pigment is taken up and removed from the center, to be deposited at the margins, and that these changes continue as the disease advances. The appearance of one spot is usually followed by the development of others, which gradually increase in size, and if situated near each other may coalesce, giving rise to a large patch of irregular outline. If the tendency continues the greater part of the integument may become involved. With the exception of the loss of normal coloration, the affected portions do not present any other anomaly, but appear to preserve their functions unimpaired.

Etiology.—Unknown.

Treatment.—Of very little service.

VENEREAL MEMORANDA.

CHAPTER XXXIX.

GONORRHŒA.

WE apply the term gonorrhœa to the contagious discharge which results from the contact of certain infectious matter with the mucous membrane of the genitals of either sex. It is usually propagated by impure intercourse.

Its three most prominent symptoms are, (1) the *discharge*, (2) the *ardor urinæ*, or scalding upon micturition, and (3) the frequent and painful *erections*. The gonorrhœal discharge is extremely contagious, and the contagious element has been found to reside in the pus globules. Experiment has shown that the filtered fluid is non-infecting, and experience teaches that whereas a purely mucous discharge may prove innocuous, the presence of pus in the discharge renders it contagious in direct ratio to the amount present.

Gonorrhœa is notorious for running a very

uncertain course. In one patient it will subside under almost any plan of treatment, while in another it is only checked by the most assiduous care on the part of the physician, and strict obedience on the part of the patient. At the outset it is often impossible to say whether the disease will last two weeks or six weeks or even longer. All cases, however, bear a sufficient resemblance to each other to admit of a division of the disease into certain stages. We have then an *acute* or *inflammatory*, a *sub-acute*, and a *chronic* stage. In some cases the early inflammatory symptoms are lacking, and the disease runs its course in a sub-acute form. Occasionally during the chronic or gleety stage the disease from various causes may resume this sub-acute form.

After an impure connection, a number of days (usually from three to ten) elapse before the symptoms of the disease appear. This period is (sometimes) called the *stage of incubation*. As the morbid process in gonorrhœa undoubtedly begins immediately, or very shortly after the infecting discharge comes in contact with the affected part, it is evident that the stage of incubation is a convenient rather than a correct expression. In most cases it will be found that the longer this period has lasted, the less severe will be the ensuing attack.

Examination of the diseased urethra by means of the endoscope has demonstrated what would naturally be inferred, viz., that gonorrhœa begins at the lips of the meatus. From the fossa mavicularis, which is the portion chiefly affected in the early stage, the inflammatory process extends backward to the bulbous, membranous, and prostatic portions of the urethra. The first noticeable sign of the disease is a slight smarting, or tingling, at or near the meatus, shortly followed by a thin serous discharge. Sometimes this sensation is so slight as to pass unnoticed until the patient's attention has been attracted by the discharge. The meatus is now found to be reddened and swollen, its lips perhaps slightly glued together. The discharge quickly becomes mucous or muco-purulent in character, and of an opaline color. Urination is attended by scalding. In a few days this scalding or *ardor urinæ* becomes quite painful, the glans penis is congested, and the discharge is profuse and purulent. It is now perhaps five or six days from the commencement of the discharge, and the gonorrhœa is at its hight. This acute stage is characterized not only by a marked degree of local inflammation, but frequently by aching pains in the groins and testicles, with a slight

elevation of temperature, anorexia, and general malaise. The discharge, which has changed from a whitish to a yellowish or creamy appearance, is sometimes of a greenish-yellow hue. If the inflammatory action occasions painful erections, the discharge may be either streaked with blood, or of a rusty or brownish-yellow color. The ardor is in some cases very severe and felt throughout the pendulous portion of the urethra. The prepuce, if long, is very apt to become cedematous and cause a temporary phimosis. If tight it induces a balanitis, which adds both to the discomfort and discharge. Erections of the penis in this stage become frequent and painful, and usually occur at night when the patient is warm in bed, and especially toward morning when the bladder becomes distended. This acute stage, during which the gonorrhœa remains at its height, may last one or two weeks. The discharge then begins to lessen in amount, and with it usually the ardor and priapism.

As gonorrhœa declines it follows in inverse order the steps of its development as far as regards the quantity and character of the discharge. The thick and creamy discharge gradually becomes thinner and whiter, the

amount of pus is lessened, leaving the mucous element in excess ; and finally the discharge is reduced to a thin, sticky drop, as in the incipient stage. In an uncomplicated case, under judicious treatment, this final drop or moisture disappears, except in the morning upon rising, and shortly ceases altogether. Through negligence on the part of the patient, and sometimes through injudicious treatment on the part of the physician, the discharge as it exists at any period of this declining stage may be continued indefinitely. We have then a chronic stage which will be considered by itself under the name of gleet.

TREATMENT OF GONORRHŒA.

Experience teaches that any rational method will prove successful in the majority of cases ; while, on the other hand, no treatment has as yet been discovered which will not occasionally disappoint our expectations. The “infallible cure,” which some friend of the patient is always anxious to recommend, is extremely apt to fail, while the “new and efficacious plan of treatment,” constantly going the rounds of the medical journals, is usually an old and too often a worthless method.

The remedies which have been proposed for

the cure of gonorrhœa are legion, and even those in use at the present time will not admit of enumeration. It will suffice to mention a few which are considered the most trustworthy, and the manner of their employment.

Treatment.—The treatment of gonorrhœa depends upon the stage of the disease, and the character and relative prominence of its varied symptoms. It may be both internal and local. While some depend solely upon the use of aperients, diuretics, alkalies, and the so-called specific remedies, such as copaiva, cubebs, and oil of sandal-wood, others place their main reliance upon the use of anodyne and astringent injections. The best results are undoubtedly obtained from a judicious use of both internal and local measures.

Internal remedies.—The use of antiphlogistics, such as bleeding, purging, tartar emetic, and low diet, belongs to the past. Rest, however, with abstinence from all stimulating food and drinks, should be strictly enforced, particularly during the inflammatory stage. Purgation is harmful, although the bowels may be opened at the beginning of an attack, and kept free throughout its course. Alkaline diuretics do good by increasing the amount, and neutralizing undue acidity of the urine,

and free demulcent drafts of the much-lauded flax-seed or slippery-elm tea are likewise beneficial in promoting the action of the kidneys.

A prescription such as the following is an excellent one in the acute stage of gonorrhœa, and is often the only internal remedy required in a case of simple urethritis.

R \bar{y}	Potass. citrat.....	30.	(3j)
	Spiritus limonis.....	2.	(3ss)
	Syrupi.....	80.	(f3ij)
	Aquæ.....	60.	(f3ij)

M

Sig. One to three teaspoonfuls in a glass of water between meals.

Of the so-called specifics, copaiva is the one generally resorted to on account of its being both effective and cheap. It not only exerts a beneficial effect upon the urethra as upon other diseased mucous membranes, but doubtless produces a direct local effect as it passes out with the urine after being excreted by the kidneys. To obtain its most satisfactory action, it should be withheld during the inflammatory stage, and given only when the redness and swelling of the meatus have begun

to subside. It may then be administered either in capsules or in a mixture as follows:

Rʒ	Bals. copaivæ	(fʒj3v)
	Syr. tolu.....	(fʒjss)
	Syr. acaciæ.....	(fʒjss)
	Aq. cinamomi.....āā 50.	(fʒj3vj)

M

Sig. One or two teaspoonfuls three times daily between meals.

While copaiva is being taken, the patient should drink absolutely nothing save the trifling amount of water necessary to allay excessive thirst. During the sub-acute, or decreasing stage, the remedy should be pushed according to the ability of the patient to tolerate it.

Should nausea, diarrhœa, or an erythematous rash result from its administration, the remedy must be given sparingly or discontinued. The addition of cubebs to the above mixture tends to render it more agreeable to the stomach. Cubebs, moreover, from its effect upon diseased mucous surfaces, is generally regarded as a specific in the treatment of gonorrhœa. Cubebs *freshly powdered*, given in tablespoonful doses will in most cases of acute

gonorrhœa produce a speedy diminution of the discharge, and at the same time lessen the *ardor urinæ*. The oil of yellow sandal-wood is a remedy similar in its action to copaiva, and in some cases superior in its effects. It is a very expensive drug, and consequently adulterated to such an extent that it is extremely difficult to obtain it in its purity. It may be given in doses of ten to twenty drops, three or four times a day, in a vehicle similar to that recommended for copaiva in the last formula. It may also be given in capsules.

Treatment by injections.—The custom of introducing strong astringent or caustic solutions into the urethra, or rather the abuse of the custom, has given rise to a belief on the part of some physicians and many “knowing” patients that injections are productive of stricture. Resort is often had to internal remedies, to the utter exclusion of a perfectly harmless and very effective mode of treatment. If injections are chosen with due regard to the stage of the disease, and the patient carefully instructed in the manner of using them, there is certainly no plan of treatment upon which more reliance can be placed. Where injections are prescribed the physician should make at least one injection himself by way of example,

or see that the patient can perform the operation in a proper manner. The ordinary small glass syringe is objectionable, particularly in the acute stage, on account of the length of its nozzle which is likely to irritate the inflamed urethra. A small hard rubber syringe with a short bulbous nozzle, or one tapering abruptly like the end of a rocket should be selected. After filling and carefully pressing out a drop of the injection in order to exclude air, the nozzle is gently introduced into the meatus, the lips of which are then firmly compressed on either side by the thumb and finger of the left hand. After the injection has been slowly introduced the nozzle can be carefully withdrawn, and the meatus closed by the thumb and finger so that not a drop is lost. The injection may be held in the urethra a short time. It should never cause pain, but should be strong enough to occasion a slight sensation of warmth or burning, if retained four or five minutes. The urine should always be voided before making an injection. There is no stage of gonorrhœa in which injections are contra-indicated. In the acute stage they must be soothing and the syringe handled with extreme delicacy. When inflammatory symptoms are present, the injection is intended to

allay the pain and discomfort rather than to check the discharge. The following, recommended by Bumstead, serves the purpose :

R̄	Extract. opii.....	1.30	(əj)
	Glycerini.....	..35.	(fʒj)
	Aquæ.....	90.	(fʒiij)

M

Sig. Injection to be used after every passage of urine.

As the pain and swelling subside, an injection should be used which is slightly astringent as well as sedative, and perhaps nothing answers the purpose better than

R̄	Liq. plumbi subacetatis..	15.	(fʒss)
	Aquæ rosæ.....	105.	(fʒiijss)

During the sub-acute stage the use of both mineral and vegetable astringents in solution proves of great value. There is but little difference in the action of the numerous injections recommended, and hence it is of little importance what one is chosen. It does make a difference, however, whether or not the strength of the injection is adapted to the condition of the urethra. A discharge will sometimes be cured by simply stopping the injection which has been keeping it up. The

golden rule is to use an injection as weak as it can possibly be and still do good. Sulphate of zinc in solution forms a cleanly and convenient injection, and its strength need not be carried above a one-half per cent. solution. The following combination of a mineral and vegetable astringent constitutes an extremely efficacious injection :

R̄	Zinc. sulphat.	0.50	(gr. viii)
	Ext. hydrastis can. fld.	10.	(f3ijss)
	Aquæ.	90.	(f3iij)

M

Sig. Inject four times daily after urinating.

As the discharge gradually becomes thinner and less in amount, the injection may be advantageously diluted or used less frequently, but continued for a week or ten days after the last drop was noticed. If within a reasonable time the discharge does not cease, a careful examination of the urethra must be made with a view to ascertaining the cause, and the treatment adopted which is mentioned under the head of gleet.

Hygienic measures.—Rest, as in all inflammatory troubles, is of prime importance ; but as most patients would consider rest in bed, or

even indoor confinement worse than the gonorrhœa, the most that the physician can do is to enjoin abstinence from too much walking, standing, and unnecessary exercise. The diet should be light and always of an unstimulating character. Water is the best beverage and the more of it the better, unless copaiva or some allied drug is being administered, the action of which, as has been stated, is increased by abstinence from fluids. Weak tea is allowable. All spirituous drinks, coffee, and above all beer, must be strongly interdicted. The penis must not be kept too warm by unnecessary wrappings, nor ligated with strings and elastic bands sometimes used to retain cloths or other dressings in position. If the prepuce is long, a small piece of bibulous paper can be folded and applied closely to the glans. This, if changed frequently, will keep the discharge absorbed and protect against balanitis. A sheet of this paper wrapped around the penis will keep the clothing from becoming soiled, and it is much lighter and cooler than the wrappings commonly used. If pain is felt in the groin and testes, and particularly when the patient is obliged to walk about more or less, it is advisable to wear a well-fitting suspensory bandage. The plan of treatment by injections,

copaiva, etc., which has been described, is directed mainly against the chief feature of the disease, viz., the discharge. The remaining symptoms generally call for special measures.

Ardor urinæ.—The burning or scalding pain felt upon the passage of urine is frequently supposed to result from the acidity of the latter. Alkalies are therefore given, frequently combined with anodynes. They produce little, if any effect, however, except as they act upon the kidneys, and thus lessen the concentration of the urine. Diuretic and diluent drinks accomplish this end, and are of value; but the local use of hot water gives the greatest relief. A warm bath daily, and the repeated soaking of the penis in a cup of water at as high a temperature as can be pleasantly borne will moderate the inflammation and produce a marked relief of the ardor. When urination is attended with great pain, the patient may pass his water with less discomfort while the penis is thus immersed. The use of hot water tends to relieve the priapism as well as the *ardor*. When nocturnal erections are painful, and disturb the patient's rest, as they are very apt to do toward morning, a prolonged immersion of the penis in hot water upon retiring is advisable.

Chordee.—When erections are accompanied by curving or abrupt bending of the penis, we have the condition known as *chordee*. This is a complication rather than a symptom of gonorrhœa, and occurs in a minority of cases. Its pathology is not entirely settled, but there is good ground for considering it as spasmodic rather than inflammatory in its nature. Its occurrence is extremely harassing to the patient, and its continuance seems to bear a relation in many cases to subsequent stricture. When a *chordee* is “broken,” as it is called, *i.e.*, when the penis is forcibly straightened during an attack, traumatic stricture is inevitable, as the straightening process involves a laceration of the urethra, and frequently induces severe hemorrhage. The numerous remedies recommended for the prevention or alleviation of *chordee* attest its obstinacy.

One or two grams (gr. xv-xxx) of lupulin taken at night affords relief in many cases. A teaspoonful of spirits of camphor will also answer in many cases. Nothing can be relied upon in all cases, unless it be the prolonged immersion of the penis in hot water upon going to bed, which invariably affords a certain amount of relief. Sleeping on a soft

bed and under heavy coverings increases the tendency to chordee. When an attack comes on the patient can usually find speedy relief by enveloping the penis in very hot cloths, by placing ice or a piece of cold iron beside it, or by jumping out of bed and standing on a cold surface such as oil-cloth.

Irritable bladder.—In the later stage of gonorrhœa, when the deeper portion of the urethra is involved, it not unfrequently happens that the inflammation extends to the neck of the bladder. The patient then complains of a frequent or continuous desire to pass water, and is obliged to get up repeatedly during the night. In such a case diluent drinks, such as flax-seed tea or infusions of buchu, uva ursi, or triticum repens, are usually followed by cessation of the trouble.

There are a number of affections such as balanitis, phimosis, swelled testicle, etc., which sometimes occur as complications of gonorrhœa, although they may also occur independently. These will be referred to separately.

Gonorrhœa in the female.—In women gonorrhœa is of less frequent occurrence and usually far less troublesome than in men, a fact which is readily explained by the anatomical charac-

ter of the genito-urinary organs. In the male the mucous membrane of the meatus is almost certain to come in contact with gonorrhœal matter in impure intercourse, and the disease when established is rendered annoying and obstinate by the oft-recurring necessity of passing urine through the inflamed urethra. In the female the parts are more or less protected by the natural secretion of the numerous glands. The mucous membrane of the vagina, which is usually the part affected, is less sensitive than that of the male urethra, is not subject to the irritating action of the urine, and is far more readily cleansed. Furthermore there are chronic discharges from the female vagina capable of producing urethritis in the male; and finally a certain class of females with gonorrhœa are very apt to indulge in sexual intercourse, while their male friends under similar circumstances are compelled to abstain through sheer necessity if not from a sense of propriety.

Gonorrhœa in the female may affect various portions of the genito-urinary mucous membrane. The vagina usually suffers and with it occasionally the urethra. The vulva and urethra may alone be affected. When the deeper portion of the vagina is the principal

seat of the disease, the inflammation may extend into the canal of the cervix uteri and even involve the lining membrane of the uterus. Vaginal gonorrhœa begins with a redness, heat, and swelling of the mucous membrane, which is preternaturally dry unless leucorrhœa has pre-existed. The secretion changes as in the male from a mucous to a muco-purulent and finally to a purulent creamy discharge. This acute stage lasts about a week, but may be followed by a chronic discharge which lasts indefinitely. When the vulva is affected the labia swell, and the condition may become an extremely painful one. The inflammation may extend into the duct of one of the vulvo-vaginal glands and occasion a painful tumor and abscess. It is extremely difficult to distinguish in the female between gonorrhœa and simple vaginitis. The most careful examination with a speculum frequently proves inconclusive, and a diagnosis can only be arrived at by judiciously considering the circumstances connected with the case.

Treatment.—In the acute stage rest in bed is desirable, if not indispensable. Daily warm baths with hot cloths frequently applied to the genitals give great relief. If the vulva is swollen and painful, lint soaked in the fol-

lowing may be laid between and over the labia, and an opiate given at night :

R̄	Tinct opii.....	4.	(f3j)
	Liq. plumbi subacetat.....	6.	(f3jss)
	Aquæ.....	90.	(f3iij)

M

Sig. *External use.*

The vagina may be washed out by means of Foster's vaginal douche, which can be used while the patient is in bed without fear of wetting the clothing. The ordinary syringe sometimes resorted to is of scarcely any use since at least a pint of water is required for each injection. The patient too must be upon her back, or else the injection, even though sufficient in quantity, will fail to reach the deeper portion of the vagina where it is often urgently needed. Simple water should at first be used at a temperature suited to the feelings of the patient, and later a solution of sulphate of zinc or alum may be employed. It is most convenient and economical for the patient to procure the salt in bulk, and then add a teaspoonful (more or less) to a pint of water, which should be injected morning and night, or oftener if necessary.

CHAPTER XL.

GLEET.

WHEN the terminal stage of gonorrhœa is prolonged beyond the time at which a cessation of the discharge usually takes place, we have a chronic condition known as gleet. The slight though obstinate discharge is the chief if not the only symptom, although the use of liquor, undue sexual indulgence, careless passage of bougies, etc., may re-establish a sub-acute grade of inflammation associated with ardor and erections. The discharge may consist simply in a slight moisture of the meatus gluing its lips together in the morning, or there may be a scanty, thin, and milky discharge only visible at times or when the urethra is firmly pressed from behind forward. Anxious patients who are constantly squeezing the glans penis in search of some trace of the attack often keep up a slight discharge in this way. This habit being stopped the inflammation speedily subsides, and the urethra returns to its normal state.

There is usually a manifest cause of gleet, and success in treatment invariably depends

upon the detection and removal of that cause. The general health of the patient must be carefully considered. Patients who are anæmic, and even many who are not, are benefited by the tincture of the chloride of iron. Cantharides, the action of which on the urinary tract is so marked, has proven of value in gleet of long standing, and a valuable combination of the above remedies we find in the following :

R̄	Tinct. cantharidis.....	2.	(3ss)
	Tinct. ferri chloridi.....	30.	(ʒj)

M

Sig. Twenty drops three times daily.

The diet of a patient with gleet is important, as dyspepsia often aggravates the discharge. Stimulating food and drinks must be forbidden, and in some cases the use of tobacco. Indulgence in impure thoughts may keep up an exalted sensibility of the organs, induce erections, and thus counteract the effect of judicious treatment.

The immediate cause of gleet in the majority of cases is to be found in the condition of the urethra, and local treatment, therefore, is generally indispensable. This consists mainly in the use of deep urethral injections and

the passage of smooth polished steel sounds. The seat of gleet, when stricture is not its cause, is generally in the deeper portion of the urethra. The discharge may either result from diffused inflammation of the urethral membrane, a continuance of the terminal stage of gonorrhœa, or it may be dependent upon the existence of a few patches of inflammation with or without a granular surface. The seat of gleet is generally recognized wherever it may be by the sensations of the patient when an instrument is passed into the urethra. If a good-sized bulbous bougie is gently introduced and slowly passed through to the neck of the bladder, the location of a congested patch can easily be determined by the increased tenderness of the urethra at that point. A granular surface of the patch is usually revealed by a slight trace of blood after the instrument is withdrawn. When a gleet is simply the prolonged terminal stage of gonorrhœa, copaiva or any internal remedy that has been of service in the case may be continued. In gleet of long standing, however, the so-called specifics produce little if any permanent effect. The ordinary injections used so successfully in gonorrhœa are of little service when the

inflammation is limited to the membranous or prostatic portion of the urethra. Injections made however with a hard rubber deep urethral syringe are productive of the best results. A convenient syringe for the purpose can be readily made by perforating the hollow shaft of a bulbous bougie with a few pin-holes just behind the bulb. When congested or granular patches exist, the bulb in passing over them will indicate the exact spot where the injection will do the most good. Solid or semi-solid substances are always used with benefit in the topical medication of the deep urethra. A soft paste of tannic acid and glycerine, introduced by means of a cupped sound, will often put an end to a chronic and refractory discharge. A more convenient plan of treatment is to employ the French gelatine bougies which are prepared and sold for this purpose. These are introduced and allowed to melt in the urethra, which they do within a half hour or thereabouts. As paste injections remain in contact with the diseased urethra much longer than the ordinary liquid injections, it is evident that their effect must be more marked. In the treatment of certain urethral discharges, the writer has during the past two years resorted to the injection of

semi-solid substances, using for this purpose a collapsible zinc tube and a soft rubber catheter. The paste can thus be introduced in any amount and at any point throughout the urethra, by simply introducing the catheter to the required distance, and gently compressing the zinc tube which contains the paste and is closed at the end. In many cases where the gleet discharge is slight, it can soon be checked by passing into the bladder a full-sized steel sound every second or third day. This presses the retained discharge from numerous small lacunæ in the walls of the urethra and quickly restores it to a healthy action. The most frequent cause of gleet, however, is stricture of the urethra, which may have previously existed or which may now exist in its incipient state. By narrowing the caliber of the urethra the free passage of urine is obstructed, though perhaps to so slight a degree as to remain unnoticed by the patient. The act of urinating does not wash out the urethra as it should do. A residual drop behind the seat of stricture acts constantly as an irritant, and an inflamed condition of the urethra with a secreting surface is maintained. To cure the gleet, then, the stricture must be treated. For a full considera-

tion of the subject of urethral stricture the reader must consult special works on the subject.

CHAPTER XLI.

COMPLICATIONS OF GONORRHŒA.

THERE are a number of affections which sometimes occur as complications of gonorrhœa, although they may likewise occur independently. These will be reviewed in order.

BALANO-POSTHITIS.

This is an inflammation of the mucous membrane of the glans penis and inner surface of the prepuce, accompanied by discharge, and often superficial ulceration.

The term balanitis is used when the inflammation is confined to the glans, while the term posthitis refers to a corresponding condition of the mucous surface of the prepuce. Balanitis and posthitis frequently co-exist, and thus necessitate the use of a compound term. A tight prepuce, neglect of cleanliness, and the irritant action of gonorrhœal matter, are the ordinary causes, and frequently act in combination.

Treatment.—If the affected surface is kept *clean and dry*, the inflammation subsides with surprising rapidity. To accomplish this it is only necessary to use a dusting powder, such as oxide of zinc or starch, or simply to place a layer of bibulous paper between the glans and prepuce, and to change it frequently. When the prepuce is long and tight, so as to hide the meatus, the purulent discharge of balanitis should not be mistaken for gonorrhœa.

PHIMOSIS.

This is a condition in which narrowing of the preputial orifice prevents the complete retraction of the prepuce. It may be congenital, or it may be due to the presence of chancre or chancroids. When the prepuce is naturally tight, phimosis not infrequently occurs in the acute stage of gonorrhœa, sometimes attended with enormous œdema of the prepuce, and swelling of the penis. Circumcision is the remedy for congenital phimosis with redundancy of prepuce. The operation requires no clamp if performed as it should be under anæsthesia. Beginning at the frænum, the cutaneous layer should first be circumcised, with a small pair of probe-pointed scissors, just on a line with or behind the corona glandis.

The mucous or internal layer should next be cut just in advance of the corona glandis, and the edges united with sutures. When the prepuce is not over-long, but too tight to be easily retracted, the constriction will be found to be in the mucous layer. If this layer be nicked with scissors at its junction with the skin, and nicked again and again as the prepuce is slowly retracted, the internal layer can be split from the meatus to the corona, when the prepuce will be found to move backward and forward over the glans with comparative freedom. Circumcision should never be performed for chancreoidal phimosis until the sores are perfectly healed, otherwise the wound will become infected, and converted into a large circular chancroid. Phimosis from chancre disappears as the induration which has occasioned it lessens.

PARAPHIMOSIS.

This is the retention of a tight prepuce behind the corona glandis. If the condition be not speedily remedied, the constricting ring produces a transverse ulcerated furrow on the dorsum penis. A recent paraphimosis is easily reduced. When of longer standing, the swollen prepuce becomes somewhat indurated by

a plastic infiltration, and the operation is then somewhat painful and difficult, often requiring the use of a knife to divide the constricting band. In reducing a paraphimosis, pain and trouble are generally lessened by first soaking the penis for a half hour in hot water, and then thoroughly drying the parts.

EPIDIDYMITIS.

“Swelled testicle” is a complication of gonorrhœa, which usually occurs in its later stage, most frequently in the second month of the discharge. Cases are reported where the testicle has swelled after coitus, but before the appearance of any discharge. In such cases some slight traumatic cause may have existed which the patient has overlooked or forgotten. Gonorrhœal epididymitis results from the gradual extension of the gonorrhœal inflammation from the deeper portion of the urethra, through the vas deferens, to the epididymis. It is not likely to occur, therefore, in the early stage of gonorrhœa when the inflammation is confined to the anterior portion of the urethra. The epididymis is the first and often the only portion of the testicle involved, although the inflammation may extend to the tunica vaginalis, and to the body of the

testicle, when the term *orchitis*, which is used by some writers, is appropriate. In the majority of cases it is the left testicle which swells. Occasionally both are affected. An attack of gonorrhœal epididymitis is ushered in by the constitutional disturbance usually attending any local inflammation of equal severity. The testicle rapidly swells, becomes extremely tender to the touch, and one-half of the scrotum is found to be reddened and hot. The epididymis and body of the testicle cannot be distinguished by manipulation in severe cases, even when the patient will allow his testicle to be freely handled, which is rarely the case. When, on the other hand, the inflammation is not severe, and is unaccompanied by effusion into the tunica vaginalis, it is quite evident to the touch that the epididymis is the only part involved. The swelling lasts from one to three weeks, according to the grade of inflammation and the mode of treatment. The testicle then gradually resumes its normal state, although a slight induration of the *globus minor* may persist for a longer period. This induration sometimes causes occlusion of the seminal duct, and consequently, when both testicles have been swollen, impotence may result.

The diagnosis of gonorrhœal epididymitis from swelling of the testicle due to syphilis, traumatism, and other causes, can usually be made without difficulty if the symptoms and concomitant circumstances are carefully observed. The *treatment* necessarily varies with the nature of the case. While the acute pain and swelling last, rest, opium, and sedative applications are demanded. Later, iodide of potassium may be given to promote resolution of the inflammation, and to lessen the tendency to induration. Leeches, ice bags, etc., are measures somewhat too heroic for the great majority of cases. A bottle of citrate of magnesia will generally act as a sufficiently powerful antiphlogistic. The patient should keep a recumbent position, and the testicles should be constantly supported by a handkerchief sling, or perineal bandage. Poultices are both agreeable and beneficial. An excellent one is often made of fine-cut tobacco and flax-seed. When there is considerable effusion into the cavity of the tunica vaginalis puncture will be followed by the evacuation of serum, and by marked relief to the patient. As the inflammation subsides, the patient must resume exercise with caution. The plan of "strapping" a testicle has been frequently

recommended and employed ; but it is an inconvenient procedure, productive of harm when not properly performed, and rarely if ever superior to simpler means. A well-fitting suspensory bandage should be ordered for every ambulant patient, and, indeed, if this be worn throughout an attack of gonorrhœa, it may serve as a prophylactic against epididymitis. The gonorrhœal or gleet discharge which often co-exists with swelled testicle may still be treated by the usual internal remedies, but the use of bougies and injections should always be suspended. .

GONORRHŒAL RHEUMATISM.

In a few rare instances an attack of gonorrhœa is accompanied by an affection of certain joints and tissues of the body, closely resembling rheumatism. It is not brought on or affected by exposure to cold, dampness, etc., and is not especially prone to attack those patients who at other times are subject to rheumatism. It lacks some of the essential features of ordinary rheumatism, and it is not benefited by approved anti-rheumatic remedies. When it occurs in one attack of gonorrhœa, it generally reappears with subsequent attacks. It is attended by no decrease or

change in the character of the urethral discharge. For a concise description of the affection, and its contrast with ordinary rheumatism, the reader may study the following table arranged by FOURNIER :

Gonorrhœal Rheumatism.

1. Cause—urethral inflammation. No influence of cold in the production of the rheumatism.

2. Very rarely observed in women.

3. Non-febrile, or much less so than simple rheumatism. Even in acute cases, reaction never attains the habitual intensity of rheumatic fever.

4. Symptoms habitually limited to a small

Simple Rheumatism.

1. No etiological relation with the state of the urethra. Habitual causes—cold, inheritance, rheumatic diathesis, etc.

2. Common in the female, although less frequent than in the male.

3. Reactional phenomena much more intense and prolonged than in the gonorrhœal rheumatism.

4. Symptoms usually involve a number,

number of joints. The affection never becomes general to the same extent as simple rheumatism.

5. Less movable than simple rheumatism, going from one joint to another less quickly. No delitescence, no real jumping from one joint to another.

6. Local pains generally moderate, always less than in simple rheumatism. Sometimes remarkable indolence.

7. Frequently a tendency to hydrarthrosis, following the acute fluxion.

8. No sweating.

9. Urine not modified.

sometimes nearly all the articulations.

5. Symptoms—movable ambulatory fluxions, rapid delitescence, jumping from one joint to another.

6. Pains always rather intense, sometimes excessive, disappearing less rapidly than those of gonorrhœal rheumatism.

7. Little or no tendency to consecutive hydrarthrosis.

8. Abundant sweats, constituting a symptom almost essential to the malady.

9. Urine specially modified.

10. Blood not furnishing a marked buffy coat.

11. Cardiac complications very exceptional.

12. Frequent coincidence with a special ophthalmia, inflammation of the synovial sheaths of tendons, inflammation of bursæ, etc. The latter localities may be exclusively implicated.

13. Relapse in the course of successive gonorrhœas very frequent.

10. Blood forming a firm concave clot with buffy coat.

11. Cardiac complications frequent.

12. Acute rheumatism does not affect the eye; the bursæ escape, as do usually the sheaths of tendons.

13. Relapse frequent, but always independently of the state of the urethra.

The treatment of gonorrhœal rheumatism consists mainly in rest and local sedative applications, with later, counter-irritation to promote the absorption of any serum about the joints.

GONORRHŒAL OPHTHALMIA.

One form of the gonorrhœal rheumatism just described affects the eye, either alone or

in connection with the joints and fibrous tissues. This affection must be carefully distinguished from the gonorrhœal conjunctivitis, which results from the transfer of gonorrhœal matter from the urethra to the mucous surfaces of the eye. The distinction between the two will be shown in the shortest and clearest manner by again having recourse to a table prepared by FOURNIER :

Gonorrhœal Ophthalmia.

1. Contagion plays no part in the production of the malady, which is developed under the influence of an internal cause, the nature of which is unknown.

2. Only attacks patients already suffering from gonorrhœa.

3. Commonly both eyes.

4. The symptoms are those of an inflammation of the mem-

Gonorrhœal Conjunctivitis.

1. Essential cause—
inoculation of the conjunctiva with gonorrhœal pus.

2. May affect subjects not suffering from gonorrhœa.

3. Usually only one eye involved.

4. The symptoms are those of the gravest kind of purulent oph-

brane of Descemet, of an iritis, or of an oculo-palpebral conjunctivitis.

5. Sometimes the inflammatory phenomena are mobile, passing from one eye to the other.

6. Frequent relapses in the course of subsequent gonorrhœas.

7. Coincidence with gonorrhœal rheumatism very habitual, almost constant.

8. Prognosis without gravity.

9. Expectation, or the simplest treatment sufficient for a cure.

thalmia. They affect the conjunctiva primarily.

5. Symptoms fixed, not going from one eye to the other.

6. No tendency to relapse in subsequent gonorrhœas.

7. No coincidence with rheumatic manifestations.

8. Prognosis excessively grave, often loss of the eye.

9. The eye is only saved by a most energetic treatment.

The treatment of gonorrhœa lconjunctivitis demands the utmost care and judgment. Its details should be learned in works upon ophthalmology.

CHAPTER XLII.

CHANCROID.

THE chancroid is a contagious ulcer usually occurring upon the genitals. Like gonorrhœa it is commonly the result of impure intercourse. A chancroid is never syphilitic, nor does it ever lead to syphilitic infection. In short, the chancroid has no relation whatever to syphilis beyond a mere resemblance to its initial lesion, viz., the chancre. This doctrine of two distinct venereal sores, first advanced by Bassereau in 1852, is now held by the majority of leading syphilographers. It should be stated, however, that there are eminent authorities who claim that the chancroid or *soft* chancre is not distinct in its nature from the indurated chancre, though modified to such a degree that it is not capable, save in rare instances, of producing constitutional infection. From this difference of opinion arise the terms "Unicist" and "Dualist," the application of which is quite apparent.

The chancroidal virus can be demonstrated neither by microscopical examination nor by chemical analysis. We know it merely by its

effects, which are ample evidence of its existence. The virulent secretion of a chancroid will produce a characteristic sore upon either skin or mucous membrane, provided there exists at the point of contact the slightest rent or abrasion. Upon the unbroken epidermis it produces no more effect than would vaccine virus if placed on the arm without previous scarification. Were this not the case, chancroids upon the hands of both patient and physician would be quite common. Unlike the syphilitic virus, which is only inoculable as a rule upon non-syphilitic persons, the chancroidal virus will produce a chancroid whenever and wherever brought in contact with an abraded surface. Inoculation signifies a transfer of chancroidal matter from one person to another, thereby producing a similar sore. This is sometimes spoken of as *hetero-inoculation*, and may result of course from accident or design. When a chancroid is propagated or reproduced (either intentionally or accidentally) upon the same person, we have what is termed *auto-inoculation*. Upon certain portions of the body, and particularly the head, the susceptibility to chancroidal infection has been found to be less than elsewhere. Sores produced by inoculation upon the face, chest, or abdomen

are smaller and heal more speedily than sores produced upon the extremities. When chancroids are reproduced upon the body in great numbers, as has occurred in the discarded practice of syphilization, a period is finally reached when the virus fails to produce the usual sore.

The chancroid has no period of incubation like the chancre or vaccine pustule. It is true that after an impure intercourse a number of days may elapse before the attention of an unsuspecting patient is called to the existence of a sore, but when inoculation is performed intentionally the incipient chancroid appears within twelve to twenty-four hours. It begins as a small red papule, rapidly becoming a pustule, with an inflammatory areola and perhaps a thin crust, and within five or six days a small round ulcer with a dirty grayish base. When the chancroid is accidentally acquired, the pathological process begins in like manner, as soon as the virus gets beneath the epidermis or epithelium. It runs a course similar to that of the chancroid from inoculation, save that on the mucous membrane the ulcer is developed more rapidly than on the skin, often appearing fully formed the day after exposure to infection. The occasional delay in the

development of the sore may result from the fact that the virus has been in contact with sound skin or mucous membrane which it is incapable of infecting. After maceration has destroyed a minute patch of epidermis or epithelium, the conditions are favorable to the production of a sore. Sometimes, and especially upon the skin of the penis, the incipient pustule dries and a crust forms over the ulcer. This is termed an *ecthymatous* chancroid. Sometimes the virus enters a follicle, and a reddened conical pustule like a small boil is formed. This constitutes a *follicular* chancroid.

The chancroid is frequently single, but is more apt to be multiple. If a number of minute abrasions, even too small to be seen, should exist at the time of impure intercourse, or be occasioned by this act, the virus would inoculate each point, thus producing a number of chancroids. When but a single sore exists at the outset, others are liable to be produced in its vicinity by auto-inoculation. This is frequently the case where strict attention to cleanliness is not observed. The free purulent discharge flows over the surrounding parts, macerates the epidermis, and as soon as the slightest erosion of the surface has been pro-

duced, this point is immediately inoculated. Bearing this in mind, the value of any dressing intended to keep the parts dry will at once be appreciated.

The chancroid may be circular or oval. Two or more however may coalesce and form an irregular sore. When a wound is infected the chancroid assumes a similar shape, and when phagedena occurs one side of the sore may heal while the other advances. The chancroid is not painful unless irritated, which is very frequently the case when the prepuce is tight or caustics are improperly applied. The base is usually soft. Occasionally inflammation is set up in the surrounding tissue, and a hard swelling like that around a furuncle is the result. This inflammatory hardness is sometimes mistaken for the specific induration of chancre.

The classical description of the chancroid as found in the books is only applicable to a certain number of cases, for experience teaches that there is a wide variation in its aspect and its severity. In one case we see a small superficial whitish ulcer, which disappears in a few days. In a second case we see a sore destroying a considerable portion of the penis. Both are rightly called chancroids. Careful

observation and *confrontation* of patients has shown that the mild or the severe type of sore usually reproduces one of similar aspect.

Diagnosis.—Though widely differing in appearance, all chancroids possess certain characteristics which generally render a diagnosis easy. Their main features are as follows: necrosis of tissue, purulent discharge, absence of *specific* induration, and tendency to produce a suppurative inflammation of the inguinal glands. In the destruction of tissue, which is the *sine qua non* of chancroid, we have its most important and distinctive feature as compared with chancre. In the latter the ulcerative process is secondary, and not unfrequently is absent. In certain cases, and particularly in those ill-treated, the chancroid, as has been said, may occasion a high degree of inflammatory action in the surrounding tissue. The inflammatory hardness or plastic exudation which results ought not to be mistaken for the “split pea” induration of the chancre. In some cases it is quite impossible at first sight to distinguish the chancroid from the chancre on the one hand, or from a simple ulcer or patch of herpes on the other. A careful study of the progress of the sore in the latter case, and a resort to the touchstone of inoculation

in the former, will usually suffice to clear up any doubt. If a suspicious sore be successfully inoculated upon the body of the person bearing it (auto-inoculation), that sore is probably a chancroid, or possibly a combination of chancre and chancroid (mixed chancre). If the result is a negative one, the sore may be either a chancre or a simple ulceration. In every auto-inoculation, which should be performed in the same manner as vaccination, the chest or side of the patient below the level of the nipple should be selected, as experience has shown that a chancroid in this location is apt to be smaller than elsewhere, less subject to phagedena and less likely to involve any lymphatic glands. When the inoculation has "taken," and an undoubted chancroid has resulted, it should immediately be thoroughly cauterized, and thus converted into a simple ulcer which will rapidly cicatrize. The inoculation of pus from almost any irritable sore is capable of producing a small pustule, but this must not be mistaken for a chancroid.

For a concise description of chancroid, and the diagnostic characters which serve to distinguish it from chancre or the initial lesion of syphilis, there can be nothing better than the following table taken from BUMSTEAD :

*The Chancroid.**Origin (confrontation).*

In practice always due to contagion from a chancroid or chancroidal bubo or lymphitis.

Incubation.

None; the sore appears within a week after exposure.

Commencement.

Commences as a pustule, or as an open ulcer.

Number.

Often multiple, either from the first, or by successive inoculation.

Depth.

Perforates the whole

*The Chancre.**Origin (confrontation).*

Always due to contagion from the secretion of a chancre, syphilitic lesion, or from the blood of a person affected with syphilis.

Incubation.

Constant; usually of from two to three weeks' duration.

Commencement.

Commences as a papule or tubercle, which afterward, in most cases, becomes ulcerated.

Number.

Generally single; multiple if at all from the first, rarely if ever by successive inoculation.

Depth.

Most frequently a

thickness of the skin or mucous membrane ; “punched out” and excavated.

Edges.

Abrupt, sharply cut, eroded, undermined.

Floor.

Whitish, grayish, pultaceous, “worm-eaten.”

Secretion.

Abundant and purulent.

Induration.

No induration of base, although en-

superficial erosion “scooped out,” flat, or elevated above the surface ; rarely deep, and then cup-shaped, sloping toward the center.

Edges.

Sloping, flat, or rounded, adherent.

Floor.

Red, livid, or copper-colored, often iridescent. Sometimes covered by a false membrane, scaly exfoliation, or scabs.

Secretion.

Scanty and serous, in the absence of complications. Auto-inoculable with great difficulty.

Induration.

Firm, cartilaginous, circumscribed, mova-

gorgement may be caused by caustic or other irritant, by or simple inflammation; in which case the engorgement is not circumscribed; shades off into surrounding tissue, and is of short duration.

Destructive tendency.

Often spreads and takes on phagedenic action.

Frequency in the same subject.

May affect the same person an indefinite number of times.

Lymphitis.

Inflammation of the lymphatics rare.

Characteristic gland affection.

Ganglionic reaction

ble upon neighboring tissues; sometimes thin, resembling a layer of parchment, or again, annular; generally persistent for weeks or months.

Destructive tendency.

Phagedena rare and generally limited.

Frequency in the same subject.

One chancre usually affords complete, and always partial protection against another.

Lymphitis.

Induration of the lymphatics common.

Characteristic gland affection.

The superficial gan-

absent in the majority of cases. When present, inflammatory ; suppuration frequent ; pus often auto-inoculable.

Transmission to animals.

May be transmitted to the lower animals.

Prognosis.

Always a local affection ; the general system never infected.

Effects of treatment.

Treatment by mercury always useless, and in most cases injurious.

glia on one or both sides enlarged and indurated, painless, freely movable ; suppuration rare and pus auto-inoculable.

Transmission to animals.

Peculiar to the human race.

Prognosis.

A constitutional disease ; general symptoms usually occur in about six weeks after the appearance of the sore, and very rarely delay longer than three months.

Effects of treatment.

Improves under the influence of mercury.

Prognosis.—The prognosis of chancroid is good as far as the healing of the sore is concerned, unless complicated with phimosis or phagedena. When sloughing attacks a chancroid it immediately destroys its virulent nature, the same as a thorough cauterization in the early stage. Upon the fall of the slough a simple ulcerated surface is left. Phagedena, on the other hand, which has been well defined as molecular gangrene, does not destroy tissue rapidly enough to prevent its becoming infected. A phagedenic sore may therefore spread indefinitely if not checked by proper treatment. Sometimes a chancroid which is nearly healed will suddenly relapse or break out again upon the slightest irritation, or even without apparent cause.

Inguinal bubo occurs in about twenty per cent. of cases.

As to general syphilitic infection, the prognosis must be guarded even when the patient has a typical chancroid or soft sore. For as syphilis may have been contracted at the same time as the chancroid, and as the stage of incubation of chancre is occasionally over a month's duration, it is evident that the specific induration may occur at any time during this period, and even after the chancroid has healed.

Treatment.—The numerous lotions recommended by quacks and others, as a certain preventive against venereal infection, are of doubtful efficacy. A thorough washing of the penis immediately after a suspicious intercourse is an advisable precaution, and, in some cases, doubtless prophylactic.

If a chancre is seen by the physician during the first three or four days of its existence, a thorough cauterization will usually transform it into a simple ulcer, with a tendency to rapid healing. This is called the abortive treatment. If seen later, cauterization is of less value, and unless it be extremely thorough is often entirely futile. In the reparative stage of chancre, cauterization is quite unnecessary. The diagnosis must be carefully made before caustic is resorted to, or else, as is frequently the case, a simple erosion or a patch of herpes, which would heal quickly if left alone, may be converted into a large and angry sore. A true chancre, *i.e.*, the initial lesion of syphilis, never requires cauterization, and the rule of many surgeons to cauterize every suspicious sore is founded upon the mistaken notion that cauterization has the power in some cases to avert constitutional infection. The best of the many caus-

tics recommended in the treatment of chancre is, without doubt, the actual cautery. A button or small flat coil of platinum wire heated to a *white* heat by the galvanic current, is almost painless in its application and productive of the best results. A thermo-cautery, in which the platinum button is heated by means of petroleum vapor or ordinary gas, may be conveniently used. Of the ordinary chemical caustics, pure nitric acid, or nitrate of zinc are the most desirable. Both are very effective, and yet their action is readily under control. The pain caused by their application may be greatly lessened by either first cauterizing the sore with pure carbolic acid, or else applying a few drops of Magendie's solution of morphia after the cauterant has been used. In using nitric acid a glass rod may be employed, or what is better a tuft of cotton wrapped around a probe or a pellet of bibulous paper held by a pair of light forceps. Care should be taken that no drop of acid run over upon the parts adjacent to the sore. The so-called cauterization of a chancre by lightly touching it with a stick of nitrate of silver does far more harm than good. If the few days during which this abortive treatment is useful have elapsed before the patient is seen,

all that can be done is to prevent the chancroid from spreading, and inoculating the surrounding parts, and to guard as far as is possible against inflammation of the inguinal glands. Mercury has no effect upon the chancroid, and should not therefore be used either internally or locally. Lifting, running, dancing, and in short, all violent work or exercise should be avoided as favoring the development of bubo. The local treatment of chancroid is all-important, and the chief aim should be to keep the sore and the surrounding parts *clean and dry*. Washing with castile soap (a common practice with some patients) is injurious, and if the sore be kept clean by an absorbent dressing there will be no necessity for washing it at all except with simple water. A dressing of dry lint is far cleaner and better than the much-used black wash, or yellow wash, and the various lotions and ointments (which latter are not only useless but positively injurious). Japanese paper, or the thin bibulous paper employed by dentists for absorbing the saliva in operations on the teeth, has been extensively used by the writer as a dressing for chancroid, and is in many respects superior to lint. If frequently renewed, the paper keeps the discharge absorbed, protects the surrounding

parts, and fulfills the chief indication of local treatment which, as has been remarked, is to keep the sore clean and dry. Bibulous paper may be medicated in various ways, but its chief value is as an absorbent. Iodoform, either pure or rubbed up with two parts of sugar of milk, and sprinkled upon a chancroid, has a remarkably beneficial effect in most cases. It usually allays any pain which may be present, and expedites the healing of the sore. Its peculiar odor, however, frequently renders it somewhat disagreeable to both the patient and his friends. When a chancroid assumes a phagedenic action, which is rare, the actual cautery is of excellent service. The potassio-tartrate of iron, Ricord's "born enemy of phagedena," may be given internally, one gram (gr. xv) three times daily, and used at the same time in saturated solution as a lotion.

The dressing of a chancroid varies somewhat with its location and the condition of the prepuce. Where the latter is of usual length and easily retracted, a small folded piece of bibulous paper may be placed upon the sore, the glans wrapped in a single layer of the paper, and the prepuce brought forward. This does away with cumbersome wrappings, strings, and retentive bandages. When the

sore is upon the skin of the penis, however, or when a short prepuce leaves the glans uncovered, a narrow, light bandage is required to keep the dressing in position. Chancroids upon the inner surface of the prepuce are generally multiple, and when the prepuce is rather tight, and especially when there is a neglect of cleanliness, they are very apt to occasion phimosis. In such cases it is impossible to keep the chancroids perfectly clean and dry, but they should nevertheless be kept as clean as possible. To this end frequent injections of lukewarm water or a weak solution of chlorinated soda, permanganate of potash, or carbolic acid, should be made between the glans and the prepuce. A convenient syringe is one recommended by Taylor, with a flat, hard rubber nozzle, perforated by numerous pin holes. Should the discharge be very profuse, a plug of oakum or paper may be inserted into the preputial orifice after each injection. Attempts should be made to retract the prepuce, and expose the chancroids as soon as possible. Soaking the penis frequently in a cup of hot water will lessen the inflammatory thickening, and hasten this desirable end. No cutting operation is admissible at this time. Should circumcision be attempted before the

chancroids are entirely healed, the probabilities are that the wound will become infected, and a huge circular chancroid result. When chancroids exist at the preputial orifice, together with phimosis, as is often the case, it is useless to cauterize them, as they would immediately be reinoculated by the discharge from the chancroids situated beneath the prepuce. Chancroids involving the frænum require the greatest care in order to keep them clean. Should perforation of the frænum occur, it is advisable to cut the remaining bridge close to the glans, and then trim off the little prominence left on the prepuce. The hemorrhage is usually slight, as the inflammatory process tends to occlude the artery of the frænum. In any case a pad of bibulous paper and a little pressure will arrest it, and after the frænum is cut the chancroid will be found to be far more amenable to treatment. Chancroids of the meatus are annoying as the passage of urine over them hinders their cicatrization. A bit of lint or paper should be inserted between the lips after each urination. A deep-seated chancroid of the urethra can be best diagnosticated by auto-inoculation, and best treated by local applications with the aid of an endoscope. Chancroids of the anus and

rectum may occur, and frequently result in troublesome stricture.

In the female, chancroids are most frequently met with at the posterior commissure of the vulva. They also occur upon other portions of the vulva, in the vagina, and even upon the os uteri. Where an irritating vaginal discharge is present, and regard for cleanliness is absent, a chancroid at the posterior vulvar commissure often attains a considerable size. Occasionally phagedena occurs, and a frightful destruction of tissue is the result.

CHAPTER XLIII.

BUBO.

THE word bubo, viewed etymologically, refers only to an affection of the groin. It is applied to any inflammatory swelling of the inguinal glands having a tendency to suppuration. This excludes the painless induration of the inguinal glands which accompanies every genital chancre, and which ought not to be spoken of as bubo.

Analogy gives us the right to use the term bubo when speaking of a glandular swelling

of the neck, axilla, or other locality due to an extra-genital chancroid.

A bubo, then, is an adenitis. With respect to causation, it may be classed as a *simple inflammatory* bubo, or as a *virulent* bubo. A simple or "sympathetic" bubo, as it is sometimes called, may result from a chancroid, a gonorrhœa, or from any inflammatory condition of the penis, such as balanitis, herpes, etc. It may also arise from lifting, jumping, straining, or any sudden or violent movement, or from an inflamed sore upon the leg or foot. It occasions more or less pain and tenderness, and often considerable alarm; but rarely goes on to suppuration if properly cared for, unless the patient is in poor health, or of strumous tendencies. The simple bubo occasioned by chancroid has the characteristics of an ordinary abscess, the inflammation occurring in the cellular tissue around the gland rather than in the gland itself. Sometimes in strumous subjects a large, indolent, lumpy tumor forms in the groin, involving a number of glands, and remaining for a long time with little or no tendency to suppuration. The pus from a simple bubo is not auto-inoculable, differing in this respect from that of the virulent bubo, which in many instances cannot be distin-

guished from it, save by the test of inoculation.

The virulent bubo results from the presence of chancroidal virus within a superficial lymphatic gland, which virus has been conveyed to it from a chancroid by means of the communicating lymphatic vessels. It is, in fact, a glandular chancroid. Nothing can prevent its suppuration, and the contained pus must inevitably find an exit through the integument. If not opened at the proper time, it will break of itself. A combination of simple and virulent bubo can often be demonstrated as existing in the same inguinal tumor. The virulent pus is within the gland, while the non-virulent is in the cellular tissue around it. If an incision be merely skin deep, the pus discharged will not be auto-inoculable; while if, by a deeper incision, the affected gland is laid open, the pus will be of a virulent character, and will quickly transform the wound into a chancroidal ulcer. A simple bubo, after the evacuation of its contents, tends to a speedy cicatrization like any other abscess. A virulent bubo, when opened; heals slowly, and often becomes chronic. sometimes it shows a tendency to extend in a serpiginous manner. Phagedenic action may

set in, and in some cases immense ulcers have resulted, laying bare the abdominal and crural muscles, and even threatening life by an exposure of the femoral artery.

Treatment.—At an early stage of bubo, it is impossible to decide upon its nature. It is advisable, therefore, to regard every bubo as a simple adenitis, and effort should be made to check it by rest and other antiphlogistics, until signs of virulency are evident. If the bubo be virulent in character, this plan of treatment will do neither harm nor good. In case of a simple adenitis, on the other hand, the measures adopted may subdue the inflammation, prevent suppuration, and obviate the pain and discomfort which even a simple abscess may occasion. Irritation of the chancroid by repeated cauterization must be avoided as tending to the aggravation of a bubo. A thorough cauterization of the chancroid at the outset might have prevented a bubo by removing its cause, but it must be borne in mind that a bubo is rarely developed until after the time for this abortive treatment has passed. The patient's bowels should be opened, and a saline or antimonial mixture may be administered. A certain amount of rest is indispensable, and should be enjoined. Of counter-

irritants, the commonest and perhaps the best is the tincture of iodine, which should be made of double the strength ordered in the U.S.P. It is sometimes better to paint a broad circle or semicircle around the bubo, instead of applying the iodine directly over the seat of inflammation. Compression of buboes by a truss, bandage, hot brick, shot-bag, etc., has been recommended; but this plan, outside of hospital wards, seems to be more troublesome than efficacious. When suppuration has taken place, the pus, if non-virulent, may be removed by an aspirator or hypodermic syringe, or by a free incision. A virulent bubo must of necessity be converted into an open one, and the sooner this is done the better. For opening buboes, both the knife and caustics have been employed. Incision is by far the preferable method, even when the integument has become so thin as to require trimming with the knife or scissors after the bubo has been opened. It is sometimes well to shave the skin before incising a bubo, and if the patient is at all nervous, an anæsthetic may be given. (Nitrous oxide gas is the pleasantest for both patient and physician.) If no anæsthetic is used, the patient's fears should be quieted, and when the amount

of pus in the bubo has been estimated by palpation, and the length of the incision required is determined, the point of a curved bistoury should, with one sweep, be rapidly plunged into the pubic side and out at the other extremity of the abscess, the knife cutting through the integument in a line parallel with Poupart's ligament.

If a bubo is opened slowly and timidly, the struggle or movement of the frightened patient interferes with the safety and freedom of an incision; while, if it is opened carefully but quickly, the operation is completed before the patient can move or utter a remonstrance. If a bubo is opened in season there will be no sinuses. If suppurating glands are found projecting into the cavity of the abscess, their removal by the knife or the spoon-scraper will facilitate the healing process.

The open bubo should now be packed with oakum, and a poultice applied for a day or two. The dressing may be advantageously moistened with a solution of carbolic acid (3-6 per cent.). If sloughing is imminent, a powder, consisting of tar one part, and gypsum seven parts, is an excellent application. When the cavity is filled, and the smooth, granulating surface needs a little stimulation, the follow-

ing ointment may be spread on a soft rag, and applied daily :

R̄	Bals. Peru	4.	(3j)
	Vaseline	30.	(3j)

M

CHAPTER XLIV.

SYPHILIS.

HISTORY AND GENERAL CONSIDERATIONS.

It was during the last decade of the fifteenth century that this disease first attracted notice. Whether it existed before, and whence it came, are questions which cannot be definitely answered. Appearing first in Southern Europe, it spread rapidly through other portions of the continent and to the adjacent islands, and soon became recognized as an important and formidable affection, in its symptoms and consequences rivaling leprosy, with which it was later confounded. From that time until the present the disease has continued to exist, and has spread to every country penetrated by the footsteps of civilized man. Although the

main features of the disease are the same as those which it presented in the beginning, it has in certain respects been somewhat modified. It is more especially as regards its general severity that we are more fortunate than our predecessors. Although we occasionally find isolated cases which fully realize the descriptions given in the past, they certainly are very rare. As the severe cases of the present day are chiefly those which have been neglected or improperly treated, it is not improbable that these causes were the principal factors concerned in the production of the state of affairs described by the older writers. On the other hand, the comparative mildness of the disease as at present seen is undoubtedly due to the more general attention and more judicious treatment that it now receives. The wide diffusion of the disease, however, and its ever readiness to assume, under favoring influences, the most malignant and destructive phases, render it worthy of the most serious study. It is in fact the most important of the affections which receive attention in this volume. In consequence of the varied phenomena presented by the disease, we are compelled to consider it from several points of view ; more particularly its modes of propagation, its lesions, its

course and variations, its diagnosis, prognosis, and treatment.

MODES OF CONTAGION AND PROPAGATION.

Syphilis is usually contracted during sexual intercourse, but this is not the only medium by which it may be propagated ; it may be also communicated by kissing, and through vaccination, and by certain unnatural practices. It may also be given by syphilitic wet-nurses to their nurslings, and *vice versa*, as well as by drinking vessels, table utensils, pipes, etc.

Manifestations.—The manifestations of syphilis are so numerous and multiform that the disease can only be comprehended in its entirety by a careful analysis of its phenomena from several different points of observation. We shall therefore consider its lesions and stages, and the tissues and organs liable to be affected.

Lesions.—The principal lesions of syphilis are macules, papules, tubercles, vesicles, bullæ, pustules, gummata, and diffuse infiltrations, and, dependent upon some of the foregoing, ulcerations, crusts, and scars. The definitions already given (p. 10) of the lesions met with in non-syphilitic affections of the skin apply equally to those of syphilis. It is

necessary, however, to define the term *gumma*, a lesion which plays an exceedingly important part in connection with this disease. The name is applied to certain circumscribed nodules located in the subcutaneous connective tissue, or within the substance of various deeper organs. These nodules consist mainly of collections of closely-packed small round cells, which preserve their form and vitality for a certain length of time; but which ultimately become the seat of degenerative processes, and undergo cheesy metamorphoses, or disappear by means of suppuration and ulceration. These gummata rarely appear in the early stages of syphilis, but, as a rule, play their rôle in connection with the later developments of the disease.

Stages.—Three stages of syphilis are usually described, namely, the primary, secondary, and tertiary. We must admit, however, two others, to wit, a stage of incubation which is present from the time the disease is contracted, and lasts until the appearance of the first visible manifestation of the disease. When this latter, to which the name of *chancre* is given, develops, we have the beginning of the so-called primary stage. This lasts until the appearance of certain general symptoms an-

nounce the secondary stage. This in turn is followed by the tertiary; but between the two there is usually a stage or condition characterized by the appearance of lesions which, under the usual definitions, we hesitate to term either strictly secondary or strictly tertiary. To this period the term intermediary may with propriety be applied.

The stage of incubation.—This period varies from two to five weeks, but its usual duration is from three to four weeks. Its commencement dates from the entrance of the syphilitic virus, but during its continuance there is not the slightest symptom or visible lesion that can be recognized as pertaining to the disease about to be developed. If the contagion gains entrance through an abrasion this latter heals just the same as it would have done if there had been no inoculation; if the disease is conveyed with vaccination, the vaccine vesicle pursues its early course unmodified. At the end of the period of incubation we find arising at the point where the virus has entered a small, somewhat tawny red, indolent papule. This papule is called a *chancre* or the initial lesion of syphilis, and marks the commencement of the “primary” stage.

The primary stage.—The papule may in its

further course undergo several modifications. If situated upon the skin, as in artificial inoculations, it usually remains as a dry papule over which the stratum corneum is seen tightly stretched; later this layer separates, and is perceived at the summit of the papule as a thin scale. If the tissues lying directly underneath the papule be delicately grasped between the thumb and index finger a certain amount of resistance is perceived. This resistance is due to the presence of a layer of hard infiltrated tissue constituting the so-called *induration*. The induration may be confined to a lamina not much thicker or stiffer than a piece of parchment, or it may approach the size of a split pea or even the half of a small cherry. It is this induration which constitutes the fundamental characteristic of the true or hard chancre as distinguished from the chancroid. After an uncertain period, varying from two weeks to two months, the chancre undergoes retrogressive changes, which consist in the subsidence of the papule and disappearance of the induration. In many cases of cutaneous chancre the above described course is not strictly followed. The epidermis, instead of remaining as a tense membrane stretched over the papule, gives way, and a superficial ul-

cer results. The secretion from this ulcer is scanty in amount, and unless irritated contains but little pus.

When the chancre appears upon the mucous surfaces of the penis, it may present the characters of the dry papule above described. More frequently, however, erosion or ulceration occurs, owing to the more delicate character of the epithelium. When the lesion is situated at the preputial reflexion we not uncommonly find an excessive degree of induration.

When the chancre appears upon the female genitals, it rarely presents more than the slight parchment induration, and sometimes even this is absent or inappreciable. In a very considerable number of cases in females, the chancre passes through its various stages, and disappears without having awakened the attention of the patient.

Extra-genital chancres, as those situated upon the lips and the mammæ, generally exhibit marked induration.

Chancre is usually painless, unless irritated by excessive venery or other causes. Under these circumstances it may become inflamed and painful, and covered with a free purulent exudation, and be with difficulty distinguished from a chancroid.

Chancre is not, as a rule, inoculable upon a person bearing it, or upon another who is already syphilitic.

Adenitis.—Within a week or ten days after the appearance of the chancre we usually find other symptoms arising, which are highly characteristic of syphilis. These are indolent and indurated tumefactions of certain lymphatic glands. When the chancre is located upon the genitals the inguinal glands are first affected. The increase in size may occur upon one side alone, but more frequently upon both. As a rule, several glands upon each side are involved. They may vary from the size of a hazel-nut to that of a pigeon's egg, and as a rule are painless; more rarely they become inflamed and suppurate after the manner of the chancroidal bubo. The enlargement and induration persist for months, and sometimes for years. In addition, certain ganglia at the back of the neck become affected in the same way, though they rarely attain the size of the glands in the groin. Besides these, certain glands situated above the inner humeric condyle, the so-called epitrochlear or cubital glands, frequently become involved upon one or both sides. When the chancre appears upon the finger in consequence of an acci-

dental inoculation, the cubital glands are first involved, and subsequently the axillary.

Diagnosis of chancre.—When a suspicious sore exhibits the characters peculiar to chancre, and especially marked induration, together with involvement of the inguinal and post-cervical glands, the diagnosis is effected without difficulty and absolutely. If, however, induration is absent, and ganglionic involvement has not yet occurred, or the sore is inflamed and suppurating, the diagnosis may be exceedingly difficult, in fact, impossible. The special points of differential diagnosis between the chancre and chancroid have already been given (p. 224).

Secondary stage.—After the primary stage has lasted from one to two months, additional phenomena arise, and usher in the so-called secondary stage. The earlier manifestations of secondary or constitutional syphilis include general febrile action, called syphilitic fever, flat moist papules upon the mucous membranes and the integument surrounding the genital organs, called mucous patches, and a general eruption or efflorescence upon the skin. These symptoms do not always follow each other in the same order, and one or more of them may be absent.

Syphilitic fever.—This is simply a febrile attack more or less sharp, and accompanied with general malaise, gastric disturbance, headache, etc. It usually lasts for a few days only, and then passes off, and may be quickly followed by the cutaneous eruption. There is nothing distinctive in the character of the fever that will enable it to be recognized as syphilitic, except its previous history or subsequent developments. The mucous patches and special eruptions will be considered in subsequent pages. The lesions mentioned, especially the early cutaneous eruption, may disappear spontaneously, to be followed by fresh outbreaks of eruption, in which the lesions present a somewhat graver aspect. The cutaneous trouble may be papular or squamous. As a rule the eruption is extremely superficial, and when it disappears leaves a temporary stain, without scar. During this period, also, the hair may fall out, producing a more or less complete, but also temporary alopecia. The eyes, too, may become involved, and variously situated pains may torment the unfortunate victim.

Intermediate stage.—After the occurrence of various secondary symptoms which have disappeared spontaneously, or have been removed by treatment, it is not uncommon to

have a lull lasting a few weeks or months, or even years. During this period we may have absolutely no symptoms or signs indicative of syphilis; or, perhaps, the occasional appearance of an isolated lesion, which may partake of the superficial character of the usual secondary lesions, or on the other hand, may be but a foretaste of graver trouble yet to come.

Tertiary stage.—If the disease has not been definitely and permanently arrested in its development during the preceding stages, it may pass on to the condition known as tertiary syphilis. During this period we encounter profound modifications, not only of the superficial, but also of the deeper tissues and organs. The mucous membranes may become involved in extensive and destructive ulceration. The integument becomes the seat of tubercles, pustules, and ulcers, the periosteal membranes inflame, and the bones are affected with caries or necrosis. The vital organs also may become involved in the syphilitic processes. Not only the lungs, liver, intestinal tract, and kidneys, but the nerves, spinal cord, and brain may be invaded, with ultimately a fatal issue.

In the tertiary stage the patient may suffer

greatly from debility, and the establishment of a general cachectic condition

We see then, from this general review, that syphilis is a disease capable of affecting the entire organism, and often in a disastrous manner; we see that few if any of the tissues or organs are exempt from its ravages, and we are forced to the conclusion that it is a disease which invites our earnest attention and most careful consideration. To gain a proper comprehension of its varied character we must study it from several points of view, and we will commence with its effects upon the different tissues.

Syphilis of the mucous membranes.—The first visible manifestation of syphilis upon the mucous membranes is the chancre. This we have already considered. Next comes the moist flat papule or “mucous patch.” This lesion may appear upon the mucous membranes of the genitals of both sexes, and upon neighboring integument; upon the lips, tongue, soft palate, tonsils, and pharynx, and in fact any portion of the buccal and nasal cavities. It has also been met with in the external auditory canal, and upon the palpebral conjunctiva. This lesion consists of a flat elevation, varying from the size of a split pea to that of a

dime or even larger. Its elevation is usually from one to five mm. ($\frac{1}{25}''$ – $\frac{1}{5}''$). Its surface is moist, finely granular, and of a grayish aspect. It is usually one of the first of the earlier manifestations of constitutional disease. Subsequent to the appearance of mucous patches, or sometimes preceding them, we may find diffuse congestions of the mucous membranes of the fauces and neighborhood, accompanied with a certain amount of irritation and uncomfortable sensation. This condition constitutes the early "sore throat" of syphilis. This same diffuse congestion may invade the mucous membranes of the epiglottis, the glottis, and the larynx. When it does so, more or less hoarseness and even complete aphonia may be present. Beside these, and later on in the disease, we are liable to encounter another peculiar lesion. This may be described as a localized opaline or milk-white spot situated upon the tongue or buccal membrane. These milk-spots are barely if at all elevated, and usually not eroded. A single spot may appear or several may be present at the same time. When one is cured another crops out, and a succession of them not unfrequently show themselves throughout the secondary and intermediate periods, and may constitute the

only visible manifestations of the disease. The use of tobacco and negligence in the care of the teeth encourage these lesions. In the later stages still more serious affections of the mucous membranes are liable to appear, such as ulcerations about the genitals, mouth, nose, pharynx, larynx, etc. They will be considered under the head of special organs.

Syphilis of the skin.—To the cutaneous manifestations of syphilis the names *syphilo-dermata* and *syphilides* have been applied. We prefer the latter term.

Although the different syphilides vary greatly in their aspect, lesions, and course, they still possess certain common characteristics. These are *color*, *configuration*, and *the absence of local subjective symptoms*.

Color.—The *color* of the syphilides has been likened to that of copper, or of raw ham, but neither resembles it exactly ; it is a color *sui generis*, and peculiar to syphilis, which must be seen to be exactly appreciated, and is not counterfeited by non-syphilitic affections of the skin, though sometimes closely approached in certain cases of psoriasis, lichen planus, and lupus.

Configuration.—The earlier syphilides are usually composed of small lesions widely

diffused; the latter, of larger ones, more sparsely distributed. The earlier ones involving the skin but superficially, recover without leaving cicatrices; the later ones invading more deeply often exhibit a tendency to ulceration with consequent scarring, but cicatrices may result even without ulceration. The marks left by the later syphilides, are usually brown, but subsequently become white, whiter even than the normal skin. The pigment is first removed from the center of the spot, and later forms a ring around it just before its final disappearance. The white spot is thinner than the normal skin, is non-adherent and quite smooth, without the irregularities and puckerings met with in scrofulous scars.

The syphilides frequently exhibit a tendency to assume a circular arrangement. If the eruption consists of small lesions, they will often be grouped in round or oval patches, and if of large and isolated lesions, the same tendency will be noticed. A few rounded groups of pustules may be the only manifestation present. The tendency of these, unchecked by treatment, is to extend centrifugally, healing in the center, and in this way we may have a suppurating, perhaps ulcerat-

ing ring inclosing an area of discolored skin on its way to cicatricial degeneration. If the lesion be an isolated ulcer, it is usually round or oval, with perpendicular sides and a grayish base, the margins not irregular and undermined as in some other forms of ulceration. This circular configuration is observed in but few of the non-specific eruptions.

Absence of local subjective symptoms.—The syphilides, both early and late, are characterized by the absence of itching and pain. The most extreme generalized eruptions of early syphilis are as a rule free from pruritus, and wide-spread ulceration, and if it involves the skin only is unattended with pain. The different syphilides present certain special peculiarities which we will now consider.

The further study of these affections will be facilitated by arranging or classifying them according to their predominant lesions, as indicated upon p. 24.

Macular Syphilide.—This is the earliest eruption of syphilis, and usually makes its appearance within the first or second month after the development of the chancre. It consists of small red spots, from $\frac{1}{16}$ ' to $\frac{1}{4}$ '' in diameter, scattered over the thorax, abdomen, back, and upper extremities. The

macules may be discrete or confluent, and are usually upon a level with the surrounding skin, but are sometimes slightly raised. At first the color is rosy and disappears under pressure, but later becomes somewhat darker and permanent. The eruption usually lasts from four to eight weeks and subsides spontaneously.

Papular Syphilide.—This form sometimes occurs by itself, at other times accompanies, or appears just at the decline of the last-mentioned variety. It consists of acuminate or flattened elevations frequently decked with a minute scale. These papules persist for a few weeks, and then disappear, or while still existing, may be complicated with much larger papules, in fact, tubercles. The papules proper exhibit no tendency to ulcerate, but slowly subside, leaving after them a small brownish macule, which soon fades away without leaving any perceptible alteration of the skin.

Tubercular Syphilide.—This variety, as its name implies, is an eruption consisting of tubercles, ranging in size from a pea to a hazel-nut. Their summits are usually covered with a few fine scales. They may appear as an early or as a late manifestation. In the

former case, they occur as isolated lesions disseminated over the surface ; but when occurring later, they are frequently associated in circumscribed groups. The tubercles disappear by absorption or by ulceration, in either case leaving a brownish mark behind, and a more or less evident cicatrix as an ultimate condition. When they ulcerate they become covered with a greenish or greenish-black crust, underneath which lies the ulcer. This form of eruption is not infrequent, but is more commonly met with in cases of neglected syphilis, than in those which have received careful and appropriate early treatment. It is usually a late lesion.

Vesicular Syphilide.—This is a rare lesion belonging to the secondary period, and usually consists of moderate-sized vesicles, scattered irregularly over the surface, or collected in little groups. Each vesicle is surrounded by a coppery areola ; they break in a few days, and are replaced by thin crusts or scales. When the crusts are removed the surface beneath them is brownish red. This form of eruption usually lasts several months, and is maintained during this period by successive crops of new vesicles. The lesion is quite superficial, not involving the skin very

deeply, but generally leaves brownish macules, which take some time to fade away. Occasionally, small vesicles develop upon the summits of papules in connection with the early papular lesions.

Bullous Syphilide.—This is an exceedingly rare lesion in adults, but is quite common as a manifestation of hereditary syphilis in infants. It consists of large vesicles or bullæ appearing shortly after birth, whose favorite seat is the hands and feet, but they may also appear upon the trunk and limbs. It is the so-called syphilitic pemphigus of infants.

Pustular Syphilide.—Pustules occurring in connection with syphilis present several varieties, as regards their aspect, course, and termination, and are among the most important of the cutaneous lesions met with in this disease. They occur under three principal forms.

The first consists of small pustules disseminated over the surface, frequently in great number. Each pustule is found to rest upon a hard and raised base, as if the upper half of a papule had changed into a pustule. A hair frequently runs through its center. The course of these pustules is usually indolent;

each one, after lasting two or three weeks, bursts, and its contents dry into thin greenish crusts which adhere for a week or two longer. Upon the falling or removal of the crusts we find a coppery papule with a depressed and perhaps ulcerated summit. The papule slowly disappears, leaving behind a brown macule which in turn gives place to a minute white cicatrix. This form of eruption is the so-called syphilitic acne.

In the second variety we find the pustules larger than the foregoing, and without the raised base, and as a rule less numerous. They are surrounded with a tawny areola, without marked induration. The pustules soon break, and their contents dry in greenish or sometimes dark crusts; upon the removal of the crusts superficial circular ulcerations will be discovered. These heal readily, but always leave cicatrices. The eruption may persist for several months, being prolonged by the occurrence of fresh pustules. It usually appears during the latter portion of the secondary period, and may occur upon any portion of the cutaneous surface, including the scalp. This form is the syphilitic ecthyma of authors.

A third variety of pustule is met with occurring in the tertiary stages of syphilis. They

are large, isolated, and scattered over the surface, and vary in number from a single one to thirty or forty. These pustules contain a mixture of pus and sanious fluid, and soon dry into thick, dark-colored crusts, covering a deep ulcer. The ulcer gradually enlarges and continues to secrete an ichorous and unhealthy pus, which likewise dries into a crust having a greater diameter than the first one, which still adhering, it pushes before it. This process continues, new crusts form, pushing forward the earlier ones, until in time we have a stratified cone, half an inch or more in height, projecting from the surface, upon the removal of which, a deep ulcer with abrupt margins and an unhealthy base is perceived. If the progress of the eruption is unchecked, a fresh crust, possessing the characters of the former, soon forms, the ulcer meanwhile steadily enlarging. This form of eruption is sometimes called rupia.

Squamous Syphilide.—We have already noticed the fact that papular and tubercular lesions frequently exhibit scales in connection with them. In some cases this commingling of characters is so decided that it is hard to say which predominates, or even to recognize the pre-existing lesions. These mixed forms

may with propriety be termed papulo- or tuberculo-squamous. In addition to these, however, we may have lesions which are decidedly scaly from the beginning. These true squamous syphilides consist of brownish-red patches, covered with a thin coating of scales. The patches are usually rounded or annular, forming circles or segments of circles, and are very slightly elevated above the surrounding surface. The scales which cover them are of moderate size, but not imbricated, and do not form very thick layers. Usually, they do not completely cover the coppery base, but permit a little rim of it to appear at the edge. The scaly syphilide may appear upon any portion of the surface, frequently invading the scalp. It may also occur upon the palm of the hand and sole of the foot.

Syphilis of the connective tissues. — The *gumma*, referred to at page 244, is the lesion most frequently developed in the connective tissues. Its principal features have been already described.

Syphilis of the glandular and nervous tissues. — The principal lesions affecting these tissues are gummata and diffuse infiltrations. They will be considered in connection with the special organs involved.

We will now consider the principal lesions to which the different organs are liable, commencing with those of the penis.

Penis.—The chancre and the flat condyloma or mucous patch have already been noticed. These, however, are not the only lesions which may affect the organ. Well along in the secondary stage ulcerations may occur upon the glans, or upon the integument of the organ. In the former case they frequently coexist with similar lesions upon other parts of the skin, and present no special peculiarities. On the glans the ulceration may partake of almost any form and aspect, and may sometimes be mistaken for other venereal lesions, as chancroids. With a clear and definite history, no difficulty should be experienced in distinguishing them; but when this is wanting, it is often no easy matter to say with positiveness that a given lesion is or is not syphilitic, and the treatment alone may be the means of establishing the diagnosis.

Testicles.—Syphilitic lesions of these organs rarely occur until late in the disease, and usually under the form of diffused interstitial infiltrations, leading to a usually painless uniform enlargement of the organ, termed *orchitis*. The increase is gradual, and without acute

symptoms, and may produce inconvenience solely by its size, which is sometimes two or three times that of the normal organs. If we have a distinct syphilitic history, and consider the indolent nature of the lesion, there will in general be little difficulty in diagnosis. The affection is to be distinguished from gonorrhœal epididymitis, from hydrocele, from hæmatocele, and from simple inflammation depending upon traumatic causes. In syphilitic disease the testicle proper is involved; but in the gonorrhœal affection, the epididymis is the principal seat of the inflammation, the testicle not participating, or at most to a minor extent. In epididymitis the inflammation is acute, and the parts painful and tender. The other affections are to be distinguished by the rules laid down in works on surgery.

Instead of the diffuse form of orchitis, we may find one or more gummy nodules scattered through the substance of the organ. These may subside under treatment, or soften and discharge through the scrotum. The affection is to be differentiated from tubercular and cancerous disease.

Vulva.—Chancre of the vulva is very often an extremely trivial affair. If situated upon the mucous surfaces of the labia majora, or

upon the labia minora, or upon the neighboring mucous membranes, it may, though rarely, consist of a well-marked lesion, with characteristic induration. Very frequently, however, we find little more than a superficial erosion, with the least possible degree of parchment hardening.

In many instances the lesion may exist and disappear unknown to the patient. As a rule, the lesion is single, in marked contrast with the chancroid, which is frequently multiple. After the disappearance of the chancre, or even before it is entirely gone, additional syphilitic lesions may appear upon and around the vulva. These are early secondary manifestations, the so-called "mucous patches." They are usually multiple, as many as fifteen or twenty being present at the same time. This lesion presents itself under three principal forms. These are the superficial erosion, the slightly elevated and circumscribed mucous patch proper, and the hypertrophic patch or condyloma. The superficial erosion is developed upon the mucous surfaces of the labia majora, on the labia minora, and other parts of the vulva. The lesion is circular or crescentic, and is sometimes underlaid by an appreciable parchment induration. In this case it may

with difficulty be distinguished from the chancre.

The multiple character of the lesion, the sometimes irregularity of contour, and the prior occurrence of a chancre, are the principal aids to diagnosis. The raised patch or mucous patch proper develops upon the regions above mentioned, but is most distinctly exhibited upon the cutaneous surfaces immediately adjoining. It differs from the preceding in being somewhat elevated. The surface is eroded, and usually covered with a grayish, sometimes diphtheroid exudation. These lesions vary in size ; many of them may be flat papules, the size of a small pea, while others may be half an inch or more in diameter.

The *condyloma* is simply an overgrown mucous patch. The causes favoring the development of this and the preceding lesions are heat, moisture, and uncleanness, and where these exist to a marked extent the mucous patch is stimulated to excessive growth, both in height and diameter. Neighboring patches may touch and become confluent, so that we may find an extensive raised vegetating surface exuding a certain quantity of the fetid pus. The lesions mentioned are all early syphilitic manifestations.

Later in the disease, however, we sometimes meet with distinct ulcerations, often accompanying, and analogous to the ulcerative lesions of the skin. These can usually be diagnosticated as syphilitic, though often with difficulty distinguishable from chronic chancre. Sometimes the history or subsequent developments will alone enable a diagnosis to be made.

Still later in syphilis, well along in the tertiary period, gunmata may make their appearance about the vulva.

These are distinguished as submucous or subcutaneous nodules, or small tumors, which may subside under treatment, or else soften and suppurate, and discharge externally. Subsequent cicatrization and contraction of the tissues may produce more or less deformity of the organs.

Syphilis of the vagina and uterus.—The vagina is very rarely the seat of syphilitic lesions, either primary or secondary. The neck of the uterus presents them more frequently. In either case they may appear under the form of chancre, or secondarily as superficial erosions, flat papules, or ulcerations.

Syphilis of the anus.—The anal region in both sexes is liable to be affected. Primarily

it may become the seat of chancre, and secondarily, of various forms of mucous patch, and particularly of the exuberant form or condyloma. Ulcerations and ulcerated fissures are also met with.

Syphilis of the mouth.—Chancres may occur upon the lips, tongue, internal surface of the cheeks, soft palate, and tonsils. Upon the lips they usually present very decided induration.

The secondary lesions of the buccal cavity consist of mucous patches and ulcerations. The former present either the form of flat, scarcely elevated opaline patches or milk spots, and are met with upon the mucous surfaces of the lips, the inside of the cheeks, and the tongue, especially along its edges and under surface. More distinctly elevated and slightly eroded patches are met with in the same regions, and also upon the roof of the mouth, the tonsils, and soft palate. Later in the disease distinct ulcerations may appear upon the tongue, tonsils, and palate. These sometimes result in very considerable destruction of the parts affected, the tonsils being eaten away, and the soft palate more or less completely destroyed. Still later we sometimes find ulcerations in the roof of the mouth leading to necrosed bone.

The examination of the mouth will be great-

ly facilitated by the use of an instrument of the form shown in Fig. 6. It should be from five to six inches in length.

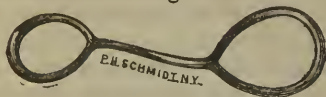


FIG. 6. ORAL SPECULUM.

Syphilis of the nose.—In the earlier periods we may find a catarrhal condition of the nasal passages, with or without mucous patches. Later, erosions and deep ulcers may occur with involvement of the perichondrium and periosteum, and result in necrosis of the cartilages and bones. These lesions are usually accompanied with more or less suppuration, and with extreme fetor of the breath. To this condition the name *ozæna* is applied. The diseased processes may continue until the cartilaginous portion of the septum nasi, the vomer, and other bones perish by necrosis. When this occurs the necessary result will be flattening of the nose with very considerable deformity.

Syphilis of the larynx.—The mucous membrane of this organ and of neighboring parts may become the seat of a diffuse but superficial congestion, not attended with any special inconvenience, except slight hoarseness.

More frequently however the disease invades the upper portion of the larynx, above the vocal cords. The membrane becomes thickened, with decided hoarseness and even aphonia. Ulcers too, of various size and depth, may form, accompanied with similar conditions of the epiglottis. Late in the disease these ulcerations may destroy the epiglottis completely, besides severely injuring the false and true vocal cords and parts beneath them. When the ulcerations heal they may greatly deform the organ, and seriously interfere with its usefulness.

Syphilis of the eyes.—The most frequent and important syphilitic affection of the eyes is iritis. It is characterized by circum-orbital pain, by injection of the sclerotic around the cornea, by change in the color of the iris, and by immobility of the pupil under the stimulus of light. Fibrinous exudation occurs at the margin of the pupil and upon the posterior aspect of the iris. The exudation is often poured out in sufficient quantity to extend to the capsule of the lens, uniting it to the iris with adhesions, which if neglected may become permanent. Iritis usually occurs early in the disease, and frequently in connection with other secondary manifesta-

tions. The choroid and retina are sometimes though rarely affected.

Syphilitic affections of the bones.—More or less severe pain usually referred to the bones may occur during the earlier months of secondary syphilis ; more frequently however it is a later trouble belonging to the tertiary period. The superficial bones are specially affected, and the pain is most severe at night. The parts affected are tender on pressure, and here and there circumscribed swellings are apparent. These are due to periostitis with lifting of the periosteum by infiltration between it and the bone. The swellings, at first soft and elastic, may undergo complete resolution, or may become exceedingly hard in consequence of the deposition of new bony material, and are then called nodes. In some cases suppuration occurs, with the formation of abscesses which break and expose the bone, which latter may have already become partially necrosed. The long and flat bones lying just beneath the skin, as the tibiæ, clavicles, sternum, and skull bones, are most liable to be affected. Besides these, necrosis of the bones of the nose, as already noticed, is apt to occur in late disease.

Syphilis of the liver and kidneys.—Syphil-

itic disease of the liver generally develops under the form of gummy tumors. Gummata of the liver may vary in size from a small seed to that of a pigeon's egg, and usually consist of a condensed connective tissue capsule containing cheesy or softened masses. They may exist singly or in great numbers. If gummata of the liver disappear, it is by softening and absorption, as they rarely if ever open on the surface of the organ. *Amyloid* degeneration sometimes occurs late in the disease, usually associated with a similar condition of the kidneys. The kidneys may also become the seats of gummy tumors and of diffuse infiltration.

Syphilis of the nervous system.—The brain, spinal cord, and nerves are liable to syphilitic invasion in the later periods of the disease. The brain not unfrequently becomes the seat of gummy tumors, usually developed in connection with the membranes. They may be single or multiple, and produce varying kinds and degrees of functional disturbance, dependent upon their number, size, and situation. The principal symptoms are pain, sleeplessness, disturbed intellect, paralyses, aphasia, epileptiform convulsions, coma, etc. Death is the usual termination. Besides the gummy

tumors located in the brain tissue, other no less important changes occur in the arteries at the base of the organ. These vessels become the seat of syphilitic new growths which to a greater or less extent occlude their lumen. The symptoms that result are such as we would expect to encounter as a consequence of diminished local nutrition.

Syphilis of the spinal cord.—Gummy tumors of varying size are sometimes found in the cord, usually in connection with the membranes, and frequently accompanied with symptoms of meningeal inflammation. If the tumors attain sufficient size to interfere with the functions of the cord various paralyses may result. If the gumma be located low down paraplegia may be induced; if higher up, the sphincters may be involved, and if the tumor is situated on the cervical region the nerves leading to the muscles of respiration may be interfered with. In this latter case the affection unless checked will prove fatal.

Course.—The natural course of syphilis is so seldom observed that we are really without exact data with which to compare its march when modified by remedial agencies. As ordinarily met with, however, we pretty constantly find that no two cases exhibit the same manifesta-

tions in the same succession; this is due in part to differences of constitution or idiosyncrasy, and in part to effects of different methods of treatment. In general, however, the earlier manifestations of constitutional disease are of a superficial character, while the later ones affect the tissues profoundly. There is frequently a distinct interval of months and even years between the secondary and tertiary lesions; while on the other hand, these latter may invade the skin and deeper organs while the former are still present. The kind of treatment employed undoubtedly influences the course of the disease. Injudicious treatment, if simply inefficient, may render the disease exceedingly capricious, or, on the other hand, proper medicines employed in excess may greatly aggravate the patient's condition.

In some instances the disease would appear capable of undergoing a spontaneous cure, a year or two of mild lesions being succeeded by complete recovery. In other cases, which perhaps have been influenced little if at all by treatment, a long period of freedom from disease may be followed by manifestations of the gravest type. The course of syphilis then is so uncertain that it is impossible to predict the sequence which the various lesions will

follow, and it is equally impossible at any given time to assert that the disease has finished its career.

Diagnosis.—Under ordinary circumstances and in the majority of cases, the diagnosis of syphilis is comparatively easy.

The *chancre* or first manifestation of the disease, is to be distinguished from *chancroid* by attention to the points given on page 224. *Mucous patches*, whether occurring about the genitals, the anus, or the mouth, can hardly be mistaken for anything else, especially if the inguinal and post-cervical glands are enlarged, and a chancre has pre-existed. It must be remembered however that in females a large proportion, if not a majority of chancres pursue their course without attracting the attention of the patient. In many cases, too, their previous existence will be denied. The various cutaneous manifestations of the disease are to be distinguished from non-specific eruptions by their color, configuration, distribution, previous history, etc. If proper attention has been paid to their peculiarities at the clinic, little difficulty will in general be experienced, as there are but three or four non-syphilitic affections that are likely to be closely counterfeited. Syphilitic roseola may

in many cases be indistinguishable from simple roseola (rötheln) in its objective aspects. The history, however, and the course of the eruption will usually assist the diagnosis. Lichen planus sometimes very closely resembles a papular syphilide, so closely indeed that even an expert may be in doubt. The diagnosis between a *squamous* syphilide and certain not very typical forms of *psoriasis* is also sometimes difficult. When the eye cannot decide our recourse is to the history. The squamous syphilide has probably been preceded during a year or two by other eruptions differing from it in character; psoriasis, by previous attacks of the *same* eruption which have appeared from time to time for perhaps many years. Some of the pustular syphilides may resemble acne, more particularly the affection of the sebaceous glands that often follows the excessive use of bromide of potassium, the so-called "bromic acne." Ulcerative lesions about the face are sometimes difficult to distinguish from lupus. In these cases a careful study of the patient's history, and the appearances of former scars, if any such exist, are often of more value in a diagnostic point of view than the aspect of the lesion itself. Further, the syphilitic ulceration has probably

lasted but a few months, while the lupous disease may have been present for years.

Syphilitic bone pains and nodes present little difficulty in diagnosis, but the affections of the viscera and of the nervous system will frequently baffle the most careful and expert diagnosticians. In fact a correct diagnosis in many cases can only be determined by carefully watching the effects of treatment.

Prognosis.—The general prognosis in syphilis is good, both as regards the removal of existing lesions, and the ultimate comfort of the patient, in cases that are seen early in the course of the disease, and are subjected to judicious treatment. On the other hand, cases that have been neglected or badly treated in the beginning are more difficult to manage, and more apt to present frequent relapses. Besides these, there are a number of other circumstances that modify the course, and consequently the prognosis. Among them may be mentioned the general health of the patient, his habits as regards temperance in eating and drinking, and his ability to procure proper and sufficient nourishment, medical attendance, etc. His occupation, if one necessitating much exposure, may likewise influence the result. In addition it must be remembered that some cases are naturally

light, and that others on the contrary are particularly severe. These various elements therefore must be borne in mind whenever we consider the prognosis of syphilis, either with respect to a particular case, or as regards the disease in general. The various lesions, too, have each their separate and individual prognosis. The chancre is rarely more than a temporary inconvenience. Occasionally, however, it becomes complicated with phagedenic action; and more or less sloughing may seriously impair the beauty and symmetry of the affected organs. Ulceration about the soft and hard palates may permanently impair the voice, and be accompanied with even more serious inconvenience. Necrosis of the bones may confine the patient to bed, and interfere for a greater or less time with his usual occupations. Affections of the eye if not promptly treated may seriously impair vision, and disease of the nervous centers may produce permanent disability or speedy death.

CHAPTER XLV.

TREATMENT OF SYPHILIS.

THE treatment of syphilis must be considered under three heads : First the hygienic, second the specific, and third the local.

Hygienic treatment.—The very first points to which the physician should devote his consideration are the condition of the patient's general health, his habits, and his surroundings. If his health is good, his habits correct, and his circumstances comfortable, it is only necessary that these conditions be preserved.

If however he is suffering from some previous disease, this should be relieved, or its effects obviated if possible. If he is intemperate, reformation is a *sine qua non* of successful treatment. Good health, good food, good air, suitable clothing, freedom from undue exposure to the elements, regular exercise, and methodical habits constitute more than half of the treatment, and combined with proper specific medication rob the disease of most of its terrors. *Per contra*, the absence of these essential elements will greatly impair the effects of otherwise judicious treatment, and not unfre-

quently lead to relapses annoying alike to the physician and the patient.

Specific treatment.—This embraces the use of mercury, the only known specific and directly curative agent yet discovered, and of the iodides of potassium and sodium, and the chlorides of gold and platinum, for the relief of certain symptoms pertaining to the later periods of the disease.

The basis of anti-syphilitic treatment may be expressed by a single word, and that word is MERCURY. That mercury when properly administered cures syphilis is beyond a question; that it is the best known remedy for this purpose we firmly believe. The question, however, is frequently raised as to whether mercury, although curing the syphilis, may not produce effects nearly if not quite as bad as the original disease. This will depend entirely upon the manner in which it is administered. Abundant experience has shown that if properly given it may be continued almost indefinitely, with the result of curing the disease, and without in any way injuring the health or constitution of the patient. On the other hand it may be given in such a way as to produce the most disastrous consequences. Mercury, then, is to enter into

the treatment. By many it is given sparingly and with hesitation, and is soon abandoned for the iodide of potassium. The majority of practitioners however, rely pretty fully upon mercury in the early secondary stage, combine it with the Iodide of potassium under the name of "mixed treatment" in the intermediate period, and trust to the iodide alone in the management of tertiary lesions. Personally we use mercury in all stages, never employing the iodide if it can be avoided.

An interesting and at the same time important question arises at this point: How does mercury cure syphilis? Is it by some alteration of the constitution of the blood, and the consequent induction of nutritional changes, or is it by direct local action of the drug upon the lesion itself? The former is the more prevalent belief, but the latter, we think, is nearer the truth. Mercury cures the lesions by its particles being brought directly in contact with them, and *cæteris paribus*, the larger the quantity of mercury that can be made thus to act, the sooner the cure, *provided* the remedy be used in such a way as not to exhibit its own peculiar poisonous effects. Mercury, like every other specific remedy, as soon as it poisons, ceases to cure, and becomes in addition

a very ready and potent agent of mischief. By these two principles the treatment is to be guided.

If the lesion under notice be a chancre (not a chancroid) it does not require cauterization, but instead a local mercurial application, and for this purpose we know of nothing better than the ammonio-nitrate of mercury. This is a black powder, and should be freely dusted upon the sore, and renewed as often as may be necessary. If this salt cannot be readily obtained, the following lotions will answer almost as well :

“*Lotio nigra.*”

R̄ Hydrarg. chlor. mite.....1. (gr. xv)
 Liq. calcis.....60. (fʒij)

M

“*Lotio flava*” seu “*aqua phagedenica.*”

R̄ Hydrarg. chlor. corros...1. (gr. xv)
 Liq. calcis.....300. (fʒx)

M

The bottles should be shaken, and the mixture applied several times a day.

If, in addition to the chancre, there is induration of the inguinal and post-cervical glands and the diagnosis is absolute, give mercury internally. For this purpose we prefer the pro-

toiodide given in pill or in trituration. Six centigrams or one grain given in divided doses may be considered the average maximum daily allowance. The following formulæ will be found convenient :

R̄ Hydrarg. protoiod.....1. (gr. xv)
 Make ninety pills. Dose six pills or less per diem.

R̄ Hydrarg. protoiod.....1. (gr. xv)
 Sacch. lactis.....9. (gr. cxi)

M

Divide into ninety powders. Dose six powders or less per diem.

In some cases it will be found that the protoiodide given as above will produce symptoms of gastro-intestinal irritation. Under these circumstances the dose must be diminished, or the drug combined with a sedative as follows :

R̄ Hydrarg. protoiod.... 1. (gr. xv)
 Ext. lactucarii.....4. (3j)

M

Make ninety pills.

Or,

R̄ Hydrarg. protoiod....
 Pulv. opii.....āā 1. (gr. xv)
 Sacch. lactis.....8. (3ij)

Mix thoroughly, and divide into ninety powders.

Or,

R̄ Hydrarg. protoiod.....1. (gr. xv)

Pulv. Ipecac. co.....9. (gr. cxi)

M

Make ninety powders.

Of these pills or powders, two may be taken after each meal until there is evidence of mercurial action upon the gums. At the very first suspicion of salivation, however, the quantity must be diminished to four, three, or even two pills or powders per diem. The degree of tolerance of mercury varies with different patients, and it is frequently necessary to skirmish for a few weeks, increasing or diminishing the quantity until the appropriate dose is ascertained. When this is determined it should be continued without interruption, if possible, for at least eighteen months. That this is frequently possible, we know by experience; that it is desirable we are fully convinced. At the end of this time if the patient has had no syphilitic symptoms other than those for which he first came under treatment, or if he has been for a considerable time without specific manifestations, all medication may be abandoned, in the hope

that the disease has been completely eradicated. In a considerable proportion of cases this hope is not an unreasonable one. This prolonged mercurial treatment is of course not to be thought of unless the diagnosis of syphilitic chancre is absolute. In cases of doubt as to the nature of the sore, it is better to wait for the development of secondary symptoms. When these appear the course just mentioned should be at once adopted, and faithfully followed up for the period mentioned with as few interruptions as possible. If there be mucous patches or other lesions about the mouth, the trituration is to be preferred to the pill, insomuch as the finely-divided drug is thus brought into immediate contact with the lesions themselves, and by its local action hastens their removal. The continued use of mercury as here recommended is possible and practicable in a certain number of cases. In others however it cannot be strictly carried out. The causes of failure are usually due either to negligence on the part of the patient, or to too large doses of the drug in the beginning. A great many patients, especially those of the lower classes, abandon all treatment as soon as the manifestations for which they sought relief have disappeared. The almost

inevitable result is, sooner or later, a relapse. This is again relieved by temporary treatment followed by another relapse, until actual symptoms of the tertiary period appear in such a form as to demand the use of iodide of potassium or other agents for their relief. On the other hand, if mercury is pushed too freely at the start mercurial symptoms about the mouth and even decided salivation may suddenly develop. This state of affairs is to be greatly deprecated, because in the first place it necessitates interruption of the treatment, and in the second place salivation is a positive evil, besides being a source of great annoyance to the patient. If salivation should occur, the mercury must be absolutely withdrawn, and sulphur in small doses frequently repeated is to be substituted. In addition the mouth should be frequently washed with tepid water to which a little chlorate of potash and tincture of myrrh have been added. Belladonna and its alkaloid are also of service. Under the use of these means the salivation will usually cease in a few days and buccal irritation gradually subside. The mercury should not however be immediately resumed. It is better to give some form of iron for a short time. *Ferrum redactum* or some of the protosalts are to

be preferred to other preparations of this metal. When the general condition has been restored by the tonic properties of the iron, the mercury is to be cautiously resumed, and continued in such a way as not to bring about a repetition of the former trouble. The regulation of the dose of mercury appropriate to each particular case cannot receive too much attention at the hands of the physician. The effort should be to give the largest amount that can be borne, without the production of gastric, buccal, or other irritation ; in other words, to overwhelm the disease without detriment to the general condition of the patient. Besides the grosser signs of excess just mentioned, the patient's spirits, strength, and weight will form useful data for the estimation of the proper amount to be given. If, under a mercurial course, mental depression and debility, which are frequent accompaniments of syphilis, are diminished or relieved, the drug is doing good. On the other hand, if they are increased, something is wrong, and the probability is that the dose is too large. In cases of doubt it is safer to err on the side of small doses than risk the larger. In the former case, recovery may be a little retarded, but no positive injury inflicted ; in the latter,

recovery will be equally retarded, with positive injury in addition. As the same dose is not suitable in all cases, and as there are no positive data by which it can be determined in advance, its proper adjustment necessitates close observation, experience, and judgment.

It will be noticed that thus far there has been no employment of the iodide of potassium.

During the past eight or nine years we have followed substantially the treatment above described in all cases that have come to us early in the disease, and in but a single instance (except in those in which the iodide had been previously given) have we found it necessary to employ it. In general, after the disappearance of the lesions for which the patient has come under treatment, subsequent developments have been trifling and unimportant, such as a few scattered papules upon the body or scalp, and milk-spots and superficial erosions about the mouth. In no case, so far as our notes and recollections serve, have iritis, pustular or ulcerative lesions occurred.

Although the protoiodide is the only preparation of mercury of which we have yet spoken, it must not be supposed that it is the only one that is of service in early syphilis ;

on the contrary, it may be replaced, and frequently to advantage, by calomel, or protoxide of mercury, or by the metal itself in a state of minute subdivision, as found in blue pill, and in triturations with chalk or milk sugar.

The foregoing applies simply to cases of syphilis that come under treatment in its early stages. In many instances, however, we will be consulted at a later period, and for lesions of a more serious character. This will often compel us to modify the treatment, and to introduce an additional therapeutical agent, namely, the iodide of potassium. This drug is extensively employed in syphilis, more frequently, we think, than it should be. Its popularity is due principally to the fact that it exerts a very prompt control over certain manifestations of the disease, and to the idea possessed by many that its effects upon the system are less injurious than those of mercury. This opinion we cannot altogether share. The iodide, however, has its special functions to perform, and under certain circumstances is indispensable; but before employing it we must understand exactly what it is capable of effecting. Mercury cures the disease, and by so doing removes the cause

that produces the various symptoms. The iodide, on the other hand, relieves certain symptoms with wonderful rapidity, but does not eradicate their cause. In other words, relapses are far more frequent after its use than after the judicious employment of mercury. The conditions to which it is appropriate are affections of the periosteum and bones, extensive ulcerations, gummata, and affections of the nervous system. In cases accompanied with severe periosteal pains, the aid of the iodide may be invoked for the relief of this symptom, a relief which, if given in sufficient doses, it usually affords. In cases of extensive ulceration, or other processes involving the integrity of important organs, and where there is not time to wait for the more tardy action of mercury, or when this latter is contra-indicated by the patient's general physical condition, the iodide should be used promptly and freely. The cutaneous eruptions and ulcerations pertaining to the tertiary period disappear more rapidly under the use of the iodide singly, or combined with the mercury, than under the use of mercury alone. The size of the dose will depend somewhat upon the patient's previous familiarity with the drug. The less he has taken on former occa-

sions the less he will probably need, and *vice versa*. In the former case, a dose of 0.30-0.60 (five to ten grains), three times a day, will usually be sufficient. It should be given in an abundant menstruum, either water or some simple syrup agreeably flavored, or with the compound syrup of sarsaparilla, or with the compound tincture of cinchona, if a tonic is needed. It is generally advisable to give mercury in addition. This may be ordered separately, or in combination with the iodide. In the latter case the vehicle or menstruum should not contain an alkaloid, as the probable result would be the precipitation of an iodo-hydrargyrate of the alkaloid. In this case, unless the mixture is well shaken, the patient will get little or no mercury in the earlier doses; but, as he reaches the bottom of the bottle, will get more mercury than he bargained for. This accident we have several times known to occur. In early syphilis the proto-salts of mercury are usually preferred; but in late disease, especially when used with the iodide, it is the almost universal custom to employ the persalts, the bichloride and biniodide being the favorites. These may be given ordinarily in doses of two to five mgs. (gr. $\frac{1}{32}$ - $\frac{1}{12}$) three times a day.

Under this treatment the lesions under consideration will usually improve in a satisfactory manner. As soon as they have disappeared, the iodide should be discontinued, and a persalt of mercury be given in small doses (one to three mgs.) for a considerable period. If the patient is already habituated to the use of the iodide before coming under treatment, somewhat larger doses than those mentioned may be required.

In cases of extensive or advancing ulceration about the tongue, soft palate, or fauces the iodide is required, and in considerable doses. No definite dose can be named. The drug must be pushed until it checks the progress of the lesion, which it will usually do, if enough of it is given. As soon, however, as the trouble is checked and fully under control, a persalt of mercury should be prescribed, and the iodide gradually diminished and finally abandoned, the mercury being continued for a few months longer.

In lesions of the nervous system also, our chief dependence is upon the iodide. If the symptoms are not urgent the drug may be given in moderate doses of about a gram (15 grs.) three times a day. If the trouble, however, is grave, the dose must be rapidly

increased. When the symptoms are finally mastered, the iodide is gradually diminished and supplemented by mercury.

From the above it will be seen that mercury and iodide of potassium both have important rôles to fill in the management of syphilis. Their properties and powers, however, are not identical, as many seem to think, and consequently they are not interchangeable. They cannot be given one for the other, in the hope of attaining the same end ; but each must be used according to the special indications of the case, the iodide to relieve symptoms and lesions in the later periods of the disease, mercury to cure the disease itself in all its stages. The foregoing are the principal agents to be employed in the specific treatment of syphilis, but a few words are necessary in regard to their administration. As a rule, mercury is given by the mouth ; when, however, the stomach or bowels are particularly irritable, the drug may be used hypodermically, or by fumigation. In the former case, the bichloride or bicyanide may be employed ; in the latter, calomel.

In *iritis* dependent upon syphilis, specific treatment must of course be employed ; mercury, if the eye trouble appears early, mercury

and iodide of potassium, if it comes on later. In addition it is absolutely necessary to dilate the pupil, and to keep it dilated, so as to prevent as far as possible adhesions between the iris and the capsule of the lens. To accomplish this a solution of atropine or the extract of belladonna should be frequently applied to the eye.

In affections of the hard palate and of the nose, especially ulcerations connected with carious bone, the chlorides of gold, and of gold and sodium appear to possess specific and directly curative powers. These salts should be given in doses not exceeding one milligram (gr. $\frac{1}{64}$) well diluted, two or three times a day. Larger doses are apt to disorder the stomach, and aggravate the local disease. The results attained with gold in the conditions specified have been surprisingly prompt and exceedingly gratifying. *Per contra*, we have not been able to obtain good results from it in other syphilitic manifestations. The bichloride of platinum in the same doses as gold, sometimes affords relief in the nocturnal bone pains, and when it does so is to be preferred to the iodide of potassium. Mezerion, guiac, sarsaparilla, and stillingia, are often useful adjuvants, but probably do not possess any specific power over the disease.

Local treatment.—If the views previously expressed (p. 281), to the effect that mercury cures syphilis in consequence of the particles being brought into direct contact with the lesion, are true, it is to be expected that local treatment, when practicable, will be exceedingly useful, and play an important part in the management of the disease. These expectations are fully verified by clinical experience.

The local treatment of the chancre has already been considered. The mucous patch, whether of the genitals or of the mouth, requires local applications. The most efficient agent for this purpose is the acid nitrate of mercury. One or two applications are usually sufficient to dissipate patches of ordinary size. If this is not available, the bichloride of mercury may be employed in a plain one per cent. solution, or dissolved in collodion. Milder preparations, *e. g.*, calomel, blackwash, etc., are less painful and less efficient. Nitrate of zinc in stick form, though not acting in a specific manner, will cause rapid disappearance of the lesion. Papular and tubercular lesions, especially about the face and other exposed parts, demand speedy removal. This may be best effected by daily frictions with *ungt. hydrarg.*, *ungt. hydrarg. ammon.*, or *hydrarg. oleat.* five per

cent. In *ulcerative* lesions, the crusts should be removed, the ulcers well cleansed, and gently touched with *liq. hydrarg. nitrat.*, and afterward dressed daily with the protoiodide in ointment as follows :

R̄ Hydrarg. protoiodidi.1. (gr. xv)
 Cerati.30. (ʒj)

M

In many cases of extensive ulceration, or of inveterate disease, the most prompt results are frequently obtained by means of mercurial fumigation, by inunction with mercurial ointment, or by hypodermic injection. One or the other of these methods is of course imperatively demanded when the administration of mercury by the mouth produces irritation of the gastro-intestinal tract.

INDEX.

	PAGE
ACARUS scabiei.....	107
Acharion Schönleini.....	118
Aene.....	76
“ sebacea.....	78
“ punctata.....	79
“ miliaris.....	81
“ simplex.....	82
“ indurata.....	84
Alopecia arcata.....	150
Anæsthesia.....	14
Anatomy.....	1
Ardor urinæ.....	194
Arteries.....	2
Balano-posthitis.....	202
Bedsore.....	142
Bladder, irritable.....	196
Bubo.....	235
Bullæ.....	11
Capillaries.....	2
Chancre.....	245
Chancroid.....	217
Chilblain.....	141
Chloasma.....	103
Chordee.....	195
Classification.....	24
Corium.....	1

Diagnosis.....	18
Eczema	46
Eczema marginatum.....	122
Elephantiasis (Arabum).....	155
Elephantiasis (Græcorum).....	68
Epididymitis.....	208
Erythema multiforme.....	152
" nodosum.....	153
Favus..	115
Fissures.....	11
Furuncles.....	143
Gleet.....	200
Gonorrhœa.....	181
Gonorrhœal conjunctivitis.....	215
" ophthalmia.....	214
" rheumatism.....	211
Hair.....	5
" follicles.....	4
Herpes.....	98
Hyperæsthesia	14
Ichthyosis.....	72
Impetigo contagiosa.....	136
Intertrigo.....	139
Keloid.....	157
Leprosy	68
Lesions	11
Lichen planus.....	159
" ruber	160
" scrofulosorum.....	162
" tropicus	145

Lupus.....	28
Lymphatics.....	2
Macules.....	10
Meissner's corpuscles.....	3
Microsporon furfur.....	133
Molloscum contagiosum.....	167
" fibrosum.....	ib.
Muscles.....	5
Nævus.....	146
" pigmentosus.....	148
" spilus.....	ib.
" vascularis.....	146
Nails.....	6
Nerves.....	2
Nomenclature.....	19
Pacinian corpuscles.....	3
Pain.....	14
Papillæ.....	1
Papules.....	10
Paraphimosis.....	207
Paratrimma.....	142
Pathology.....	9
Pediculus capitis.....	111
" corporis.....	112
" pubis.....	114
Pemphigus.....	164
" foliaceous.....	166
Pernio.....	141
Phimosis.....	206
Phthiriasis.....	111
" capitis.....	ib.
" corporis.....	112
" pubis.....	114

Physiology.....	7
Phytosis versicolor.....	132
Pityriasis “.....	ib.
Pityriasis.....	66
Prickly heat.....	145
Prurigo.....	171
Pruritus.....	15
Psoriasis.....	59
Purpura.....	169
Pustules.....	11
Rheumides.....	41
Rosacea.....	86
Scabies.....	106
Scales.....	11
Scleriasis.....	175
Scleroderma.....	173
Scrofulides.....	28
Sebaceous glands.....	4
Stratum corneum.....	1
“ malpighii.....	2
Strophulus.....	176
Sweat glands.....	3
Sycosis.....	122
Symptomatology.....	13
Syphilis.....	241
“ lesions.....	243
“ stages.....	244
“ of anus.....	267
“ “ bones.....	271
“ “ connective tissue.....	262
“ “ eyes.....	270
“ “ glands.....	262
“ “ larynx.....	269
“ “ liver and kidneys.....	271

Syphilis of mouth.....	268
“ “ mucous membranes.....	252
“ “ nerves.....	272
“ “ nose.....	279
“ “ penis.....	263
“ “ skin.....	254
“ “ testicles.....	263
“ “ vagina and uterus	267
“ “ vulva.....	264
“ course.....	273
“ diagnosis.....	275
“ prognosis.....	277
“ treatment.....	279
Telangiectasis.....	148
Tinea circinata.....	122
“ tonsurans.....	ib.
“ versicolor.....	132
Trichophyton tonsurans.....	123
Trichophytosis.....	122
“ barbæ.....	126
“ capitis.....	124
“ corporis.....	128
“ genito-cruralis.....	130
Tubercles.....	11
Ulcers.....	11
Urticaria.....	91
Veins.....	2
Verrucæ.....	149
Vesicles.....	11
Vitiligo.....	178
Xanthoma.....	101
Zoster.....	94

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